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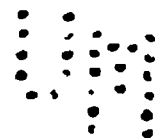
**U. S. DEPARTMENT OF LABOR
BUREAU OF LABOR STATISTICS**

ROYAL MEEKER, Commissioner

MONTHLY REVIEW

OF THE

U. S. BUREAU OF LABOR STATISTICS



VOLUME II—JANUARY TO JUNE, 1916



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SUMMARY OF ACTIVITIES FOR THE MONTH OF NOVEMBER, 1915—Concluded.

Zones and cities.	Opportunities received.		Applications for employment.		
	Applica- tions for help.	Number of persons applied for.	Applica- tions received.	Referred to employ- ment.	Number actually employed.
15. Seattle, Wash.....	27	54	1,284	52	50
Aberdeen, Wash.....	6	17	169	17	17
Bellingham, Wash.....	3	12	44	12	12
Everett, Wash.....	2	2	38	3	3
North Yakima, Wash.....	138	290	335	290	290
Spokane, Wash.....	14	21	63	20	20
Tacoma, Wash.....	9	11	58	11	11
Walla Walla, Wash.....	17	19	77	15	15
Total.....	216	426	2,068	420	418
16. Portland, Oreg.....	6	33	154	33	18
17. San Francisco, Cal.....	128	183	1,191	187	150
Fresno, Cal.....	1	1	1	1	1
Total.....	129	184	1,192	188	151
18. Los Angeles, Cal.....			187		
San Diego, Cal.....	126	217	452	213	186
Total.....	126	217	639	213	186
Total for all zones.....	847	4,650	11,908	4,459	4,146

CONCILIATION WORK OF THE DEPARTMENT OF LABOR, NOVEMBER 14 TO DECEMBER 15, 1915.

On the authority contained in the organic act of the department to mediate in labor disputes and to appoint commissioners of conciliation in his discretion, the Secretary of Labor, through the commissioners of conciliation, exercised his good offices in 10 labor disputes between November 14 and December 15, 1915. The employees involved in these controversies, the number affected, and the results secured, so far as available, are shown in the following statement:

NUMBER OF LABOR DISPUTES HANDLED BY THE DEPARTMENT OF LABOR THROUGH ITS COMMISSIONERS OF CONCILIATION, NOV. 14 TO DEC. 15, 1915.

Name.	Workmen affected.		Result.
	Directly.	Indi- rectly.	
Strike, Modern Tool, Die & Machine Co., Columbus, Ohio.....			Amicable adjustment.
Strike, Dunlap Manufacturing Co., Columbus, Ohio.....			Pending.
Strikes, machinists, Dayton, Ohio.....			Do.
Strikes, machinists, Hamilton, Ohio.....			Do.
Strikes, machinists, Trenton, N. J.....			Do.
Controversy, Jos. R. Foster Mill, Philadelphia, Pa.....			Do.
Strike, Saxonia Mills, Philadelphia, Pa.....			Do.
Strike, Cleveland-Canton Spring Co., Canton, Ohio.....	63	200	Amicable adjustment.
Cooper Spring Co., Cleveland, Ohio.....			Pending.
Perfection Spring Co., Cleveland, Ohio.....			Do.

IMMIGRATION DURING SEPTEMBER AND OCTOBER, 1915.

The data furnished by the Bureau of Immigration for September and October, 1915, show that while the number of immigrant aliens admitted was somewhat less than for the corresponding months of the year of 1914, the number of such persons admitted was greater in each of the two months than in the months of July and August of the current year.

The number of immigrant aliens admitted was 15.9 per cent less in September, 1915, and 16.3 per cent less in October, 1915, than in the corresponding months of 1914. If compared with the corresponding months of 1913, the per cent of decrease would be 82 for September and 81 for October.

In the years 1913, 1914, and 1915 the number of aliens arriving at all ports during the month of November was 119,262, 37,436, and 29,667, respectively, according to a preliminary statement of the bureau. These figures show a decline of 75.1 per cent in 1915 as compared with November, 1913, and 20.8 per cent as compared with November, 1914.

During the first 15 days of December the number of aliens arriving was 62,219, 15,208, and 12,900 for the above-mentioned years, respectively. The decrease in immigration for the first 15 days of the current month expressed in percentages is 75.6 and 15.2, respectively, as compared with the same period of 1913 and 1914.

The table which follows shows the percentages of decrease in immigration and emigration in 1915 over 1914, by months. The percentages of decrease in immigration for the months of August to October show a much less decrease because immigration began to decrease during the corresponding period in 1914 by reason of the war.

DECREASE, IN PER CENT, IN IMMIGRATION AND EMIGRATION IN 1915 OVER 1914, BY MONTHS.

	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.
Decrease, in per cent, of immigrant aliens admitted.....	65.4	70.4	79.2	79.5	75.8	68.5	64.4	41.8	15.9	16.3
Decrease, in per cent, of emigrant aliens departing.....	49.6	58.5	42.6	63.5	62.8	71.8	65.5	3.3	21.7	30.7

¹ Increase.

The following table shows the movement of immigration to this country, by races, for the months of September and October, 1914 and 1915:

IMMIGRANT ALIENS ADMITTED TO AND EMIGRANT ALIENS DEPARTING FROM THE UNITED STATES DURING SEPTEMBER AND OCTOBER, 1914 AND 1915.

Races.	September.		October.		September		October.	
	1914	1915	1914	1915	1914	1915	1914	1915
African (black).....	632	424	776	491	57	77	196	81
Armenian.....	65	51	90	55	.....	263	22	85
Bohemian and Moravian.....	59	98	55	27	7	4	1	2
Bulgarian, Servian, Montenegrin.....	279	294	249	528	88	78	100	28
Chinese.....	349	127	181	311	116	165	165	106
Croatian and Slavonian.....	214	78	83	66	64	14	7	8
Cuban.....	642	525	322	340	78	167	117	69
Dalmatian, Bosnian, Herzegovinian.....	29	4	13	27	.....	1	.....	.....
Dutch and Flemish.....	478	472	501	332	107	56	117	92
East Indian.....	11	5	5	17	34	9	20	9
English.....	4,363	3,516	4,883	3,606	677	732	897	670
Finnish.....	281	335	172	369	84	16	19	52
French.....	1,497	1,588	1,513	1,849	632	188	933	170
German.....	1,913	1,024	1,583	822	253	109	69	103
Greek.....	880	1,759	758	2,219	1,082	636	1,072	703
Hebrew.....	1,358	1,202	999	1,130	51	16	22	27
Irish.....	2,675	2,803	4,466	2,841	178	171	324	150
Italian (North).....	541	532	991	484	731	.....	662	225
Italian (South).....	3,041	2,028	3,851	1,958	9,486	16,075	10,167	9,017
Japanese.....	695	654	581	737	43	63	51	80
Korean.....	14	12	5	7	3	1	6	1
Lithuanian.....	112	57	69	36	11	3	15	4
Magyar.....	172	63	115	60	196	52	11	52
Mexican.....	1,384	766	1,367	1,032	78	24	75	57
Pacific Islander.....	.....	.....	.....	.....	.....	.....	.....	.....
Polish.....	420	336	325	199	278	83	236	22
Portuguese.....	398	1,308	233	1,029	85	301	623	126
Roumanian.....	55	67	54	47	.....	18	22	14
Russian.....	444	264	368	308	656	302	1,307	393
Ruthenian (Russniak).....	140	215	132	98	34	1	21	.....
Scandinavian.....	3,018	1,729	2,755	1,832	262	204	203	299
Scotch.....	1,699	1,277	1,744	1,284	179	196	250	162
Slovak.....	66	51	62	24	7	11	1	7
Spanish.....	518	698	473	545	396	.....	503	157
Spanish-American.....	203	192	128	197	37	44	40	43
Syrian.....	185	72	140	43	27	17	21	5
Turkish.....	18	21	18	7	5	2	25	1
Welsh.....	181	66	185	115	10	25	26	.....
West Indian (except Cuban).....	51	91	97	82	33	62	30	69
Other peoples.....	63	185	75	295	20	256	51	101
Not specified.....	.....	.....	.....	.....	2,032	1,041	1,619	679
Total.....	29,143	24,513	30,416	25,450	18,212	22,156	20,046	12,887
Per cent decline, 1915.....	.....	15.9	.....	16.3	.....	21.7	.....	30.7

¹ Increase.

AMOUNT OF EMPLOYMENT IN CERTAIN INDUSTRIES IN OCTOBER AND NOVEMBER, 1915.

The amount of authoritative data concerning the ebb and flow of industrial employment in the United States is limited. The necessity for figures on this subject is apparent. Every successful employer must know his own business, and to continue successful he needs to know the condition of the industry of which his establishment is a part, for so closely are industrial affairs related that the

prosperity of any establishment may be affected materially by the conditions of the industry as a whole. To the workingmen, the unemployed, and those seeking to relieve unemployment such figures are also of service.

To meet the demand for regular information as to the volume of employment in the country, the Bureau of Labor Statistics has undertaken the task of collecting and publishing monthly data thereon. As a measure of industrial employment, the figures most easily obtained and also most satisfactory, considering the labor of collection involved, are those showing the amount of the pay rolls of industrial establishments and the number of employees. The amount of the pay rolls is the more satisfactory measure, as it takes full account of all short time and of any variations in the intensity of production, neither of which will be indicated by the number of employees because of the common practice during periods of dull business of putting the entire force on short time in preference to laying off employees. It may be admitted that the figures for number of employees would be more satisfactory if they represented the average daily number of employees or the number of employees on a particular date, but this information is much more difficult to obtain.

The data published here represent a comparatively modest beginning in this work. The material was secured on blanks sent to representative establishments asking for figures for one pay period in October. A similar request was made for November data for the same establishments and also for iron and steel plants. Thus far there has been generous and cordial cooperation on the part of the firms addressed. It is hoped that in the coming months it will be possible to secure information from a larger number of establishments and also from other industries.

The data are from pay rolls of varying length; the majority of them are one week pay rolls, but some are for two weeks; one was for a half month and one for a full month. All have been reduced to a weekly basis so as to give as nearly as possible a proper weight to the facts for each establishment. The figures for October were secured to represent the last pay roll of that month, but acting on suggestions received it was decided, beginning with November, to change the time to the pay roll ending nearest the 15th of the month.

The figures as to the number of employees include the persons who worked all or any part of the pay period. The figures as to earnings are the actual pay-roll totals for the same period. Average rates of wages in the several industries can not be computed from these figures, nor is it possible to calculate average full-time earnings per employee, as there is always more or less loss of time on the part of some

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OF THE

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ANNUAL REPORT OF THE DEPARTMENT OF LABOR.

RECOMMENDATIONS.

The Secretary of Labor in his annual report for the fiscal year ending June 30, 1915, recommends legislation with reference to the utilization of public lands and the establishment of community credits as aids to the better distribution of labor now carried on by the department. The proposal involves the retention of title to public lands which the Government now holds and the acquisition of such privately owned lands in the different States as may be usefully devoted to the purpose of opening opportunities for employment. It is the purpose of this recommendation to make available for settlement by persons of small means, parcels of land which they may cultivate for their own uses; the land acquired or retained is to be a kind of a reserve fund upon which the unemployed may draw in times when the demand for employment slackens during industrial depression. It is the aim of the scheme to continue the benefits which in the past have been supplied by the old form of homesteading, in relieving the industrial congestion, by opening the idle lands to workers of pioneer spirit and to encourage the setting up of individual homes and to create independent farms in waste places.

“A satisfactory beginning may be made with public lands already available for the purpose in question. But it is necessary that the Government shall not lightly divest itself of title to any lands it may set aside for labor opportunities. Regulation of private tenures created pursuant to this purpose should fit the circumstances of particular cases. It is therefore suggested that private titles to lands set aside for the indicated purpose be so adjusted by the Department of Labor to its work of labor distribution as to prevent inflation of land values. This precaution is of extreme importance. Wherever inflation of land values might enter in, the proposed method of promoting labor distribution would be obstructed.”

A rotary credit fund for providing credit facilities is suggested—that is, an initial fund, to be maintained by the repayment of loans,

from which the Departments of the Interior and Agriculture could make and remake loans through the Department of Labor to competent workers seeking to become farmers, and thus establish a system of community credits based upon ability, opportunity, and character, without demanding commercial collateral. The Department of Agriculture, through its marketing plans, could safeguard borrowers against commercial misfortune in the disposal of crops, and through its labor-distributing functions, the Department of Labor could find the right men for such pioneer work. These cooperative functions should increase the demand for rural labor, reduce labor congestion in industrial centers and develop an economically independent and socially progressive population.

Other recommendations of the department propose that the Interstate Commerce Commission shall be vested with authority to fix special passenger rates to aid in placing persons in seasonal work; that that commission be empowered to regulate the interstate transportation of private troops, police, or armed guards or armed mobs, whether by employers or strikers from one State to another under commercial contracts; and that it be given authority by Congress to regulate the handling of explosives in interstate commerce on water for the protection of the immigrant station at Ellis Island where considerable transshipments of explosives take place.

All employment agencies and labor exchanges engaged in interstate business, it is urged, should be required to take out a Federal license and be placed under the supervision of the department.

The Federal Workmen's Compensation Act of 1908 should be amended so as to expedite claims under it and the Immigration Act should be amended in a similar manner, authorizing other officers than the Secretary and Assistant Secretary of the department to pass upon appeals in their absence.

Attention is also called to the need of positive legislation in respect to Hindu immigration and also to prevent Chinese admitted as members of the exempt classes or their minor sons from becoming laborers in the United States, and to the inefficiency of Chinese exclusion laws and of that part of the Immigration Act which applies particularly to Japanese aliens.

The recommendation made in a former report is renewed, asking that Congress take steps with a view to reforming what seems to be a discrimination in favor of aliens in certain States, against the national interests of the citizens of all the States, and "contrary to the spirit of the naturalization laws," in that in some States aliens are permitted to vote for members of the most numerous branch of the State legislature, thus making it possible for persons who may never become American citizens to vote for electors of the President and Vice President and Members of Congress.

THE YEAR'S WORK.

In two particulars, the Secretary states, the work of the Department of Labor during the fiscal year just closed has been especially important and successful, namely, its work in relation to labor distribution and to mediation in labor disputes.

CONCILIATION WORK.

During the year the good offices of the conciliation division of the Secretary's office were requested in 40 cases, and 2 cases were pending at the beginning of the year. In 26 instances amicable settlements were effected, and in only 10 cases did settlements prove to be impossible. Six cases go over unfinished into the next fiscal year. The 40 cases handled during the year were distributed among different industries as follows: Railroads, 5; Street railways, 2; Machinists, 7; Textile workers, 6; Paper mills, 7; Coal mining, 2; Miscellaneous, 11.

LABOR DISTRIBUTION.

In order to coordinate and to make more effective its work of labor distribution the department arranged for a national conference with such State and municipal officials as in their respective fields are engaged in similar work. This conference, which was held under the auspices of the department at San Francisco, August 2, 1915, has been fully reported in the October issue of the MONTHLY REVIEW. Also in this connection attention may be called to the account in the July issue of the REVIEW concerning the organization and work of the Division of Information and Distribution.

Since its organization July 1, 1907, up to June 30, 1915, 40,538 persons have found actual employment through the division. The number placed during the last fiscal year was far in excess of that of any previous years, being 11,871, or a trifle over one-fourth of the total number placed during a period of seven years.

On account of the special problems, it is stated, which face the department in connection with its harvest help work, and as supplying the reason for the recommendation that the Interstate Commerce Commission be empowered to grant special rates to persons seeking seasonal employment, there is to be noted the suggestion of the department for the institution of so-called "labor vacations." This is explained in the following paragraphs from the report:

Not only is the demand for help in the grain belt great during the harvest season, but in so far as this demand is met from outside the workers usually have no employment to which they may return when the harvest season ends. The problem thus presented might be solved, and other unemployment problems with it, by arrangements with industrial establishments for making their not unusual but irregular suspensions of work at such times and for such periods as would permit their employees to engage in suitable seasonal work. Not only would this assist in solving seasonal problems; it would tend to make steadier the work of the industrial establishments themselves.

To make up for their shortages of output from these seasonal suspensions the industrial establishments would increase their output the rest of the year and therefore their demand for labor. It is true that the seasonal demands for harvesters can not be filled from all kinds of industrial establishments, the physical strain of harvesting being exceptionally severe. But a sufficient supply could be obtained to meet harvesting needs; and by rational organization for the purpose those who went to the harvest could be returned to their regular work at the season's end. For workers incapable of doing heavy harvest work there are other seasonal employments.

Rationally organized, some such system could be made beneficial alike to the employers of both city and country and to the workers themselves. Nor need it be all work and no play. Going to seasonal employments in organized clubs or groups, and under the supervision of competent officials of this department, workers who volunteer would soon find this industrially useful system taking on the better characteristics of "personally conducted" vacation excursions.

OFFICE OF THE SECRETARY.

During the fiscal year ending June 30, 1915, the office of the solicitor handled 6,466 matters of various kinds involving examination as to law and facts; in 3,140 instances these were claims of injured employees under the compensation act and in 2,375 the approval or disapproval of bonds of alien immigrants.

The Division of Publication and Supplies reported an expenditure of its total appropriation of \$115,000, less 15 cents, for printing and binding for the department during the fiscal year.

The total appropriations for the department for the fiscal year 1915 amounted to \$3,940,482. There was reported an unexpended balance of \$78,412.05. Miscellaneous receipts of the department amounted to \$1,768,006.33, of which \$1,279,461 constituted the immigration head tax.

BUREAU OF LABOR STATISTICS.

The report of the Bureau of Labor Statistics for the fiscal year 1915 concerns itself very largely with the matter of its publications. During this fiscal year this bureau published 25 serial bulletins and one nonserial volume.

This bureau has in course of preparation bulletins in continuation of its statistics of prices and wages and hours of labor, but more particularly investigations relating to industrial accidents and accident prevention, industrial diseases and hygiene, morbidity and mortality of wage earners, regularity of employment, unemployment, and employment of street railway labor in the United States, profit sharing, foreign labor legislation, administration of labor laws, effects of compensation legislation, etc.

The report of labor conditions in Hawaii is well under way. In connection with this, it is noted that the commissioner recommends that the department ask that the entire paragraph of the law requiring a report of labor conditions in Hawaii every 5 years be stricken out.

Since the enactment of this law a department of immigration, labor, and statistics has been established in Hawaii, and the necessity, if it ever existed, for reports at stated intervals by the United States Bureau of Labor Statistics upon conditions in these islands no longer exists. The bureau under its general law has entire authority, with the approval of the Secretary of Labor, to make an investigation in the Hawaiian Islands whenever for any reason the commissioner of labor statistics deems it advisable. There is no more reason for this bureau being compelled by law to make an investigation in Hawaii than in Alaska.

In connection with the administration of the compensation act by the Bureau of Labor Statistics, it is reported that 2,983 claims for injury and 95 for death were established, 50 for injury and 10 for death were disallowed, and 24 for injury and 7 for death were pending at the end of the year. The number of accidents reported was 6,709, of which 141 were fatal, thus making 46 fatal accidents and 3,585 injuries which were not subject to compensation.

The Commissioner of Labor Statistics recommends the correction by legislation of certain defects contained in the compensation law such as failure to compensate for injuries of less than 15 days' duration, payment of full pay as compensation for the entire period of incapacity up to one year, failure to recognize permanent partial disability on a different basis from disability from which complete recovery may be expected, limitation of compensation payments to one year's wages, and exclusion of approximately three-fourths of the civilian employees of the Government.

BUREAU OF IMMIGRATION.

The situation created by the war is reported as having reduced immigration to the lowest level in several decades. Thus alien arrivals, both immigrant and nonimmigrant, numbered 434,244 during the year, while for the previous year this number was 1,403,081, a decrease of 968,837 or 69 per cent.

Despite this decrease in number of aliens admitted the net increase in population during the fiscal year, 1915, due to immigration was 50,070, this being a decrease as compared with the preceding fiscal year of 93.5 per cent.

During the year 24,111 aliens were excluded for various causes as compared with 33,041 in 1914, or 5.6 per cent of the total arrivals in 1915, as compared with 2.3 per cent in 1914. The most common cause of rejection has been the likelihood on the part of the alien to become a public charge, 15,596 having been rejected for that reason in 1915 as compared with 15,784 in 1914. Practically the same number in 1915 as in 1914 were rejected by reason of being contract laborers, the numbers being 2,722 and 2,793. In addition to the number who were rejected 2,564 were arrested and expelled from the country, making the total number of deportations for the year 26,675, as compared with 37,651 in the fiscal year 1914.

This bureau has been until 1915 a source of revenue but in the last fiscal year the disbursements have exceeded the revenue by \$2,070,139.08, due to the decline in immigration during the year which reduced the head tax to \$1,279,461, or by practically three-fourths of the amount for the last preceding fiscal year.

BUREAU OF NATURALIZATION.

The Naturalization Bureau is considerably more than self-supporting; thus, exclusive of overhead charges in the Secretary's office, use of public buildings outside of Washington, cost of furniture, and the depreciation of equipment, the disbursements of the bureau for the fiscal year amount to \$363,593, while the receipts came to \$441,764.

Since Federal enforcement of the naturalization law was established in 1906 and down to the close of the fiscal year 1915, 520,898 foreigners were admitted to citizenship and 74,069 petitioners were denied admission out of a total of 594,967 petitions filed. The largest number of denials of petitions for citizenship were for educational deficiencies and ignorance of American institutions.

During the year the bureau, after conference with public-school authorities, effected a plan for cooperation with the public schools for educating the candidates for citizenship.

Since each declarant must wait at least two years after his declaration before being eligible to petition for naturalization under the law, the public-school authorities in his community are advised of his declaration of intention by the bureau, which sends them his name, address, occupation, and nationality. The same information is sent by the bureau to the same authorities concerning petitioners for naturalization. At the same time the bureau advises declarants and petitioners of its action and of the advantages of public-school instruction. The school authorities thereupon endeavor to induce the declarants and petitioners for naturalization to enroll in the public schools.

CHILDREN'S BUREAU.

The staff of this bureau increased during the third year of its operation from 15 to 76 persons and its appropriation from \$25,640 to \$164,640. This bureau as well as practically also the Bureau of Labor Statistics is concerned wholly with scientific research work. The work of the bureau has included a study of administration of child labor laws, preparation of digest and tabular outlines of such laws, inquiries concerning infant mortality, the publication of material relative to baby-saving campaigns, and investigation concerning provision for the mentally defective in the District of Columbia, study of certain phases of the problem of illegitimacy, and the preparation of a compilation and analysis of laws affecting children in the United States, including laws of 1915.

The bureau points out the fact that there is a wealth of statistical material concerning the number of fathers and mothers in the United States, and the number of mothers gainfully employed outside of their homes contained in untabulated material of the Census Office, which is of value to the bureau as primary data for some of its investigations. Until this family data contained in the census reports is tabulated either by the Census Office or by the Children's Bureau it remains useless to the public and for private research which is being increasingly directed toward the economic and social status of the family.

A considerable part of the report is devoted to a statement of the unsolved problems in relation to the work of the bureau, such as "study to determine the mental and physical effect of the various types of occupation upon immature persons," standards for child labor legislation, and problems relating to the physical, economic and social conditions of rural children who, it is pointed out, constitute three-fifths of all children in the United States.

FEDERAL EMPLOYMENT WORK OF THE DEPARTMENT OF LABOR, NOVEMBER, 1915.

Reports furnished by the Division of Information of the department show that, in November, 847 applications for help were received. The number of positions open as indicated by these applications was 4,650. In October the corresponding figures were 1,104 and 5,423, respectively.

The list of branch employment offices reported varies from month to month, only those which report having received applications or assisted in securing employment being included in the list reported for the month.

The table following shows number of applications for positions and number of places filled, with the number of applications for positions per 100 places filled, August to November, 1915:

TOTAL APPLICATIONS MADE TO THE DIVISION OF INFORMATION OF THE BUREAU OF IMMIGRATION, PLACES FILLED, AND NUMBER OF APPLICATIONS PER 100 PLACES FILLED, AUGUST TO NOVEMBER, 1915.

Month.	Applicants for position.	Places filled.	Number applica- tions per 100 places filled.
August.....	17,827	6,757	263.8
September.....	13,334	5,405	246.7
October.....	12,215	5,006	244.0
November.....	11,908	4,146	287.2
Total.....	55,284	21,314	259.4

The table following shows the results of the activities of the division for the month of November, by distributing offices, totals in the various zones, and totals for the entire service:

SUMMARY OF ACTIVITIES FOR THE MONTH OF NOVEMBER, 1915.

Zones and cities.	Opportunities received.		Applications for employment.		
	Applica- tions for help.	Number of persons applied for.	Applica- tions received.	Referred to employ- ment.	Number actually employed.
1. Boston, Mass.....	2	2	34		
Portland, Me.....	1	3	3	3	3
Total.....	3	5	37	3	3
2. New York, N. Y.....	116	400	1,250	238	202
Buffalo, N. Y.....	9	306	138	85	31
Total.....	125	706	1,388	323	233
3. Philadelphia, Pa.....	41	281	964	471	428
Pittsburgh, Pa.....	15	295	320	68	60
Total.....	56	576	1,284	539	488
4. Baltimore, Md.....	12	19	191	218	218
5. Norfolk, Va.....	11	43	56	41	34
6. Jacksonville, Fla.....	6	8	149	8	8
Savannah, Ga.....	4	38	35	37	37
Charleston, S. C.....	1	20	63	28	21
Birmingham, Ala.....			36		
Mobile, Ala.....	1	2	1		
Total.....	12	68	284	73	66
7. New Orleans, La.....	1	1	13	8	1
Gulfport, Miss.....	1	12	13		
Total.....	2	13	26	8	1
8. Galveston, Tex.....			19		
Albuquerque, N. Mex.....			7	3	
Amarillo, Tex.....			1		
Del Rio, Tex.....			1		
Big Spring, Tex.....					
Total.....			28	3	
9. Cleveland, Ohio.....	4	6	65	10	8
10. Chicago, Ill.....	53	2,035	3,611	2,004	1,995
Indianapolis, Ind.....	16	153	283	172	155
Sault Ste. Marie, Mich.....	9	25	54	34	24
Detroit, Mich.....	15		114	28	28
Total.....	93	2,213	4,062	2,238	2,202
11. Minneapolis, Minn.....	29	30	19	16	14
12. St. Louis, Mo.....	5	5	87	14	11
Kansas City, Mo.....	15	97	291	99	89
Total.....	20	102	378	113	100
13. Denver, Colo.....	2	7	19	14	6
Salt Lake City, Utah.....			2		
Total.....	2	7	21	14	6
14. Helena, Mont.....	1	2	13	4	
Moscow, Idaho.....			3	2	
Total.....	1	2	16	6	

employees in a large establishment or in an industry. It should be noted also, where the per cent of increase in earnings is in excess of the increase in number of employees, that it indicates greater average earnings per employee but not necessarily increased rates of wages. The tabulation of the material secured is presented below:

NUMBER OF EMPLOYEES AND AMOUNT OF EARNINGS IN IDENTICAL ESTABLISHMENTS IN CERTAIN INDUSTRIES DURING ONE WEEK OF OCTOBER AND NOVEMBER, 1915.

Industry.	Establishments reporting.	Employees.			Earnings.		
		Number on pay roll in—		Per cent of increase (+) or decrease (—).	Amount of pay roll in—		Per cent of increase (+) or decrease (—).
		October.	November.		October.	November.	
Boots and shoes.....	66	54,517	57,551	+5.6	\$688,724	\$752,578	+9.3
Cotton goods.....	56	44,665	44,518	— .3	338,079	349,371	+3.3
Cotton finishing.....	14	12,422	12,548	+ .1	136,349	138,207	+1.4
Hosiery and underwear...	57	30,494	30,836	+1.1	274,851	278,690	+1.4
Iron and steel.....	65	.....	104,782	.....	.....	1,664,189	.....

It will be seen from a study of the above table that the number of persons on the pay roll was greater in November than in October in each of the industries listed, except in the manufacture of cotton goods, where there was a slight decrease (0.3 per cent) in the 56 establishments reporting. Despite this lessened number of employees in November for the cotton industry, it will be noted that in this industry, as well as in the other industries reporting, the total disbursements in wages was greater in November than in October. In the cotton industry a few establishments were running part time in October, which tended to cut down their wage disbursements. Hence, although there were more employees on the pay rolls, the actual disbursement in wages for the cotton establishments reporting did not total as high in October as in November. The total amount of money paid to employees in the 56 establishments reporting for the cotton industry was \$338,079 in October and \$349,371 in November, or an increase of 3.3 per cent.

The greatest increase reported was in the manufacture of boots and shoes, where the total number of people employed by the 66 concerns reporting increased 5.6 and the wages paid increased 9.3 per cent. This industry, however, is always somewhat seasonal and an increase in business in November as compared with October is to be regularly expected.

UNEMPLOYMENT IN NEW YORK CITY.

The bureau has just completed the tabulation of the results of unemployment in New York City during September, 1915. The results of an earlier investigation of the subject, made in January and February, 1915, were published in April as Bulletin 172 of the bureau. The earlier report presented the conditions of employment at a season of the year when probably the maximum number of wage earners were out of work. While it was believed that the extent of unemployment at that period was considerably above the normal, there was no way of determining this, as no trustworthy statistics existed as to unemployment in New York City in previous years which could be used as a basis of comparison. In order to determine the falling off in unemployment between the winter season, when the number of wage earners out of work probably reached the highest point, and the summer season, when the number of unemployed under normal conditions would probably be the smallest of the year, the bureau undertook the second survey. The canvas was made in August and September, 1915. The same 104 city blocks were covered as in the earlier investigation, but reports were secured from a somewhat larger number of families. The summary results of the two investigations showing unemployment in February and September, 1915, are shown in comparison in the following table:

SUMMARY OF UNEMPLOYMENT IN FEBRUARY AND SEPTEMBER, 1915.

Items.	February, 1915.	September, 1915.
Number of families scheduled.....	54,849	56,539
Number of families having unemployed wage earners.....	11,723	5,480
Number of persons in families.....	229,428	235,628
Number of wage earners in families.....	95,443	97,741
Number of unemployed wage earners.....	15,417	6,529
Per cent of unemployed wage earners.....	16.2	6.7

A comparison of the figures shows that only 6.7 per cent of the wage earners in the families canvassed in September were unemployed as against 16.2 per cent of those in the February canvass.

On the basis of the figures secured in the former study, it was estimated that the number of wage earners out of employment in the city in February was approximately 398,000, while the number out of work in September, estimated on the same basis, was only about 164,500.

It should be stated in this connection that while there were only 6.7 per cent of the wage earners wholly unemployed in September, there were in addition 8.4 per cent of all wage earners working part time only.

In October, 1915, the Metropolitan Life Insurance Co. also completed a second survey of families in New York City holding industrial

policies in that company. Their investigation was made by agents of the company and conducted in the same manner as a survey made by the company in January, and, while the same districts were covered as in the preceding census, reports were secured for a much smaller number of families.

The results of the earlier survey of the Metropolitan company were published in Bulletin 172 of the bureau, already referred to. A summarization of the figures secured in the two surveys of the Metropolitan company is presented in comparative form in the following table:

UNEMPLOYMENT AMONG WAGE EARNERS IN NEW YORK CITY, AS SHOWN BY A CANVASS OF INDUSTRIAL POLICYHOLDERS OF THE METROPOLITAN LIFE INSURANCE COMPANY, MADE BY ITS AGENTS, JANUARY AND OCTOBER, 1915.

Items.	January, 1915.	October, 1915.
Number of families scheduled.....	155,960	100,951
Number of families having unemployed wage earners.....	37,064	11,408
Number of wage earners in families.....	252,912	141,616
Number of unemployed wage earners.....	45,421	12,865
Per cent of wage earners unemployed.....	18.0	9.1

It will be seen from this table that the per cent of unemployment found in October was 9.1, as against 18 reported in January. The figures for the later date, however, covered less than two-thirds of the families and wage earners included in the earlier investigation. The results of the Metropolitan company's surveys differ somewhat from the surveys of the bureau. It is not possible to state the exact cause of these differences. It is possible that the explanation is in the different periods covered or in the selection of families, due to the fact that in one case all of the families having members who were industrial policyholders were taken, while in the other case all of the families of certain districts were taken. The differences, however, in the percentages of unemployment are so slight as practically to confirm the substantial accuracy of the investigations.

WORK OF STATE AND MUNICIPAL PUBLIC EMPLOYMENT BUREAUS.

The bureau has recently taken steps to secure for publication each month in the MONTHLY REVIEW reports of the operations of the State and municipal public employment bureaus. The figures available for the present issue of the REVIEW include complete returns from only four of the States having more than one such bureau. These States are: Connecticut, Minnesota, New York, and Ohio. The returns available from Illinois and Kentucky cover the work of

the municipal bureau in Chicago and the municipal bureau in Louisville. The work of these bureaus is shown in the first table presented below. Attention may be called also to the annual report of the Ohio Industrial Commission, summarizing the work of the Ohio bureaus, which is digested elsewhere in this REVIEW (p. 65).

In addition to these reports covering operations of the employment bureaus during November, reports have been furnished showing the work of the Richmond, Va., municipal bureau, and the Fort Worth, Tex., municipal bureau for certain months of 1915. These facts are presented in the second of the tables which follow:

REPORT OF OPERATIONS OF STATE AND MUNICIPAL PUBLIC EMPLOYMENT BUREAUS DURING NOVEMBER, 1915.

State and city.	Number of applications from employers.	Number of persons asked for by employers.	Number of persons applying for work.	Number of persons referred to positions.	Number of positions filled.
Connecticut:					
Bridgeport.....	466	466	685	(1)	430
Hartford.....	495	495	735	(1)	360
New Haven.....	426	426	436	(1)	316
Norwich.....	130	130	153	(1)	122
Waterbury.....	182	182	248	(1)	124
Total.....	1,609	1,609	2,257	(1)	1,352
Illinois:					
Chicago.....	342	2,176	5,126	1,874	1,473
Kentucky:					
Louisville.....	123	123	2484	137	75
Minnesota:					
Duluth.....	(1)	(1)	(1)	1,247	1,247
Minneapolis.....	(1)	(1)	(1)	1,920	1,920
St. Paul.....	(1)	(1)	(1)	1,175	1,175
Total.....	(1)	(1)	(1)	4,342	4,342
New York:					
Albany.....	273	374	681	647	287
Buffalo.....	478	710	686	826	503
New York City (Brooklyn).....	707	1,254	1,420	1,452	635
Rochester.....	649	986	626	932	551
Syracuse.....	428	664	647	793	573
Total.....	2,535	3,988	4,000	4,650	2,549
Ohio:					
Akron.....	(1)	1,569	1,134	1,483	1,156
Cincinnati.....	(1)	1,303	1,678	1,444	1,138
Cleveland.....	(1)	6,127	3,129	4,857	4,138
Columbus.....	(1)	2,004	1,148	1,941	1,551
Dayton.....	(1)	1,073	927	985	902
Toledo.....	(1)	2,621	1,753	2,409	2,217
Youngstown.....	(1)	1,433	812	1,315	1,048
Total.....	(1)	16,130	10 10,581	14,439	12,150

¹ Not reported.

² Also 1,158 renewals.

³ Also 2,079 renewals.

⁴ Also 3,504 renewals.

⁵ Also 6,905 renewals.

⁶ Also 2,424 renewals.

⁷ Also 1,460 renewals.

⁸ Also 2,642 renewals.

⁹ Also 1,154 renewals.

¹⁰ Also 20,168 renewals.

REPORT OF THE OPERATIONS OF RICHMOND, VA., AND FORT WORTH, TEX., MUNICIPAL EMPLOYMENT BUREAUS FOR CERTAIN MONTHS OF 1915.

	Number of applications from employers.	Number of persons asked for by employers.	Number of persons applying for work.	Number of persons referred to positions.	Number of positions filled.
Richmond, Va., 1915:					
February.....	89	392	899	325	179
March.....	128	506	851	454	333
April.....	123	240	673	296	254
May.....	113	227	665	316	184
June.....	136	237	659	238	166
July.....	146	254	550	269	158
August.....	218	355	526	367	202
September.....	288	558	615	393	181
October.....	253	514	671	468	181
November.....	204	352	571	354	166
Total.....	1,698	3,634	6,680	3,480	2,004
Fort Worth, Tex., 1914-15:					
December.....	142	168	1,816	177	161
January.....	102	151	1,340	160	145
February.....	55	71	752	79	68
March.....	103	138	1,088	146	133
April.....	74	89	844	94	85
May.....	86	103	876	112	99
June (wheat harvest).....	123	522	974	654	406
July.....	80	259	506	275	199
August.....	115	201	422	220	189
September (cotton picking).....	173	580	1,311	740	405
October.....	132	287	566	305	269
November.....	218	251	552	266	236
Total.....	1,408	2,820	11,047	3,228	2,395

STRIKES AND LOCKOUTS IN THE UNITED STATES FROM JULY THROUGH NOVEMBER, 1915.

According to data compiled by the United States Bureau of Labor Statistics from newspapers and other sources, the number of strikes and lockouts during the five months, July to November, inclusive, was 577; one strike which started in May and 29 strikes and 3 lockouts which started in months not specified, but all of them not previously reported, were also brought to the attention of the bureau during November, making a total of 610 new labor disputes during the five months ended November, 1915. The total number of strikes and lockouts occurring during the 11 months of the calendar year, including the important strikes that began prior to January 1, 1915, but remained unsettled on that date, is 1,268. The total number of strikes and lockouts during the year 1914 was, according to the bureau's data, 1,080.

The following table, which has been corrected for months previous to November as reports have come in during the latter month, shows the number of strikes and lockouts begun in each of the months of July to November, 1915, inclusive. Inasmuch as strikes that start toward the end of the month are sometimes not reported until the following month the number of strikes reported for November is not

complete. The strikes and lockouts were distributed among the months as follows:

NUMBER OF STRIKES AND LOCKOUTS, JULY THROUGH NOVEMBER, 1915, BY MONTHS

	July.	August.	Septem-ber.	October.	Novem-ber.	Total.
Strikes.....	92	136	150	93	72	543
Lockouts.....	5	6	10	8	5	34
Total.....	97	142	160	101	77	577

A brief account of the character of the strikes occurring from July to October may be found in the previous, or December, issue of the MONTHLY REVIEW. The data in the tables which follow relate to 142 strikes and lockouts concerning which information was received by the bureau during the month of November and includes, therefore, strikes and lockouts which occurred in previous months as follows: October, 11; September, 12; August, 6; July, 3; May, 1; and 29 for which the dates of commencement were not reported.

The strikes reported during November were mainly in the north-eastern part of the country, as indicated by the following statement which shows the number of strikes by States for those States in which 10 or more strikes were reported. From this table it is noted that 81 strikes occurred in the Northeastern States, while 14 occurred in Ohio. The table follows:

STATES IN WHICH 10 OR MORE STRIKES OCCURRED DURING NOVEMBER, 1915.

State.	Strikes.	Lockouts.	Total.
Connecticut.....	29	.....	29
Pennsylvania.....	21	.....	21
New York.....	15	2	17
Massachusetts.....	14	.....	14
Ohio.....	11	3	14
Other States.....	41	6	47
Total.....	131	11	142

Five of these strikes and lockouts were confined to women, and four included both men and women; the others were in occupations in which women are not ordinarily engaged. No lockouts were reported in which women were concerned.

The distribution among those occupations for which five or more strikes and lockouts were reported was as follows:

NUMBER OF STRIKES AND LOCKOUTS IN SPECIFIED OCCUPATIONS, REPORTED DURING NOVEMBER, 1915.

Trades.	Strikes.	Lockouts.	Total.
Building trades.....	13	3	16
Clothing.....	8	.....	8
Machinists.....	26	4	30
Metal polishers.....	10	.....	10
All other occupations.....	74	4	78
Total.....	131	11	142

In 68 strikes and lockouts it was stated whether the employees were connected with unions, as follows: In 3, the strikers were not connected with unions; in 2, they were not so connected at the time of striking, but almost immediately organized themselves into unions; in 63, the strikers were union members.

In 110 cases the causes of the strikes and lockouts were given. Of these 64, or 58 per cent, related to questions of wages and hours. Of the strikes 27 or 26 per cent were for an increase in wages and 20, or 19 per cent, for a reduction of hours.

CAUSES OF STRIKES AND LOCKOUTS REPORTED DURING NOVEMBER, 1915.

Cause.	Strikes.	Lockouts.	Total.
Wages.....	27	1	28
Hours.....	20	1	21
Wages and hours.....	14	1	15
Discharge of employees.....	8	2	10
Presence of nonunion men.....	8	1	9
Agreement.....	6	.....	6
Recognition.....	5	.....	5
Other causes.....	15	1	16
Total.....	103	7	110

In 48 of the strikes the number of the persons involved was reported to be 27,471. In 4 of these the number of strikers was 20,700, leaving 6,771 distributed among 44 strikes, or an average of about 154 persons connected with each strike, omitting the 4 largest. In 8 lockouts the number of employees involved was reported to be 2,410. In 1 of these the number was reported to be 1,500, thus making the average number of those involved in the remaining 7 lockouts to be 154.

THE LLANO DEL RIO COOPERATIVE COLONY.

BY HUGH S. HANNA.

The Llano del Rio colony is a cooperative colony now in process of development in the Antelope Valley, Los Angeles County, Cal. It was started about a year and a half ago by a small group of individuals with practically no capital. There are now between 600 and 700 persons resident at the colony and the property owned includes about 8,000 acres of cultivable land.

The colony is still in its pioneer stage. Outwardly, it is, in many ways, raw and crude. Most of its plans are still plans. But as an experiment in cooperative government and cooperative living it has already progressed sufficiently far to merit thoughtful attention. This brief description attempts to sketch the colony as it now exists, with a hint as to its plans and possibilities.

The Antelope Valley is in the southern part of California, about 40 miles northeast of Los Angeles. The valley is a vast semidesert

plain stretching between two mountain ranges. The climate is excellent. The natural vegetation is that of the desert, but with irrigation the ground becomes extremely fertile and is adapted to a large variety of crops, including the culture of certain fruits. The water necessary for irrigation is available, but as yet little use has been made of it.

The colony located itself in the western end of the valley, close against the mountains. The nearest railroad station is distant about 20 miles. Convenient to the colony there are several mountain creeks the water rights of which it has secured. Also, it is in control of the Big Rock irrigation district, which assures to it most of the flow of an important creek. Thus far, for irrigation purposes, the colony has made use of simply the natural flow of water from the mountain creeks, building diversion dams, and constructing ditches as necessary. The supply thus secured is sufficient for a very considerable part of the land now held. By the building of a large dam a water supply sufficient for approximately 20,000 acres can be readily secured. Water power is also available, but has not yet been turned to account.

The Llano colony in its chief aspiration—that of common ownership and cooperative production—is akin to the cooperative experiments of the past; but in its organization and business methods, and to some extent in its aims, it differs in many essentials from any of its predecessors.

It is not based upon any dogma or creed, except the belief in the practicability of cooperation as a business and social principle. Inasmuch as this faith in cooperation is the dominant principle in the enterprise, nearly if not all of the individuals attracted by it are socialists, but there are no requirements as to party affiliation or creed subscription. Nor has the colony attempted to lay down an inflexible program of future action. Thus far its work has been largely experimental, and it is felt that with a few general principles as a basis individual problems can best be attacked as they arise.

Its external organization is similar to that of any corporate business enterprise. It is organized as a corporation under the laws of the State of California, with a capital of \$2,000,000, divided into shares of \$1 each. Every subscriber to the company must take 2,000 shares of stock, payment to be made partly in cash, partly in future labor. There are to be no dividends in the usual sense of the word. The division of all income is on the basis of work done. A day's labor is the unit of measurement. All members are to receive the same income to the extent that they work the same number of days. Thus it is impossible for a subscriber to derive any benefit from his investment unless he is an active worker in the colony. All labor, skilled and unskilled, manual and mental, is regarded as of the same social value and to be rewarded upon the same basis.

Women as well as men may be active members of the colony. Wives need not be subscribers unless they so desire, but, if so, they may participate in regular work upon the same terms as their husbands. Under certain conditions, older children may also become active working members.

All land and all means of production are owned by the company, or, in other words, by the members in association. Complete liberty of ownership exists, however, in all forms of household and personal property. Furthermore, there is no attempt at or idea of communal living. Each family has its own house and arranges its housekeeping and domestic life generally as it sees fit.

Thus far the active work of the colony has been necessarily concentrated upon farming and the housing of its residents. There are at present about 200 tents and small brick houses, in which the families live, and a large central hotel at which the single men are accommodated. Work is now beginning upon the laying out of a permanent town site. If the prepared plans are carried through there will result a modern town, laid out upon scientific lines, substantially and attractively built.

It is the purpose of the colony to be entirely self-sufficient as far as labor is concerned and as industrially self-sufficient as may be possible. From the labor standpoint this aim is substantially realized, the present residents representing practically all the important trades and professions—farmers, carpenters, miners, engineers, teachers, etc.

Farming (including cattle raising, dairying, fruit growing, and poultry raising) is the most important single industry and will probably continue to be such. At present there are about 1,200 acres under cultivation. A very large part of this is in alfalfa, with about 150 acres in garden, 55 acres in young pear trees, two producing orchards and several thousand young fruit trees in nursery. The mechanical equipment consists of one large tractor, 3 motor trucks, and several automobiles. The live stock comprises 75 work horses, 150 head of cattle, and about 200 hogs. In addition, there are large poultry and rabbit departments and several hundred colonies of bees. Most of the branches of farm work are under the management of men of experience in their respective lines.

A fish hatchery with about 60,000 trout has been established at one of the mountain lakes. Arrangements have been made to add a million fish in the near future.

The colony is manufacturing its own brick, running its own planing mill and operating its machine shop. A shoe factory is owned and is in operation but has not yet been moved to the colony property. There is also owned the machinery for a steam laundry and some other manufacturing equipment which has not yet been housed. The plans call for a number of industrial enterprises, such as a can-

nery, a knitting mill, a tannery, and a moving-picture company. The purpose is to produce primarily for consumption but the outside sale of products will, of course, be necessary if the colony is to be fully successful.

The internal affairs of the colony are under the control of all residents, male and female, over 18 years of age, including members of families who may not be stockholders. These, in assembly, elect a commission of 9 members, to which is given general administrative authority over the details of management. The commission appoints managers for the several departments into which the work is divided and each manager appoints the necessary foremen. The managers and foremen meet every evening in a business session. The matter of assigning members to the work which they are to do has so far caused little or no difficulty or complaint.

Two of the most interesting phases of the colony's activities and possibilities are those of education and social life. To some extent the educational system of the colony is tied up with that of the State, but in practice the colony will be almost entirely free to develop such a system of education as it may choose. One of its first acts was the establishment of a Montessori school. It is the intention to associate closely the work of the schools with the industrial work of the community and to develop thus a real system of industrial education.

The matter of social life is strongly emphasized. This is done not only because of the isolation of the colony but because it is regarded as of vital importance to the success of the community idea. It is believed that proper amusement and recreation are almost as necessary to the life of human beings as are their food and clothing and that they should be considered as such in the development of the colony. With this in mind, one of the first activities was the construction of a central meeting hall at which the residents could gather for conversation, to play games, and for general social life. Once or twice a week dances are held at which a large proportion of the residents participate.

It is too soon as yet to judge of the success of the colony, either as a social or as a business organization. As a business organization its success will depend, of course, upon its ability to support itself. At the start it was assumed that the community could not be placed upon a self-supporting basis for five or six years at the least. The management now believes that this end may be attained within a shorter time than originally counted upon as necessary. In the early period of development the difficulties are necessarily very great. An entirely barren desert has to be turned into a farm, a system of irrigation has to be constructed and several hundred people have to be given proper shelter. During the first year the community

was able to produce about 75 per cent of the food it consumed and it is estimated that about 90 per cent is now being produced. Purchases from the outside are comparatively few, because living is as yet upon a simple scale.

CANADIAN INDUSTRIAL DISPUTES INVESTIGATION ACT.

The Canadian Industrial Disputes Act was reviewed and the purpose, administration, and results of the law, and the sentiment toward it were discussed in some detail in bulletins of the Bureau of Labor Statistics No. 76, May, 1908; No. 86, January, 1910; and No. 98, January, 1912. The study contained in the last-named bulletin brought the experience under the act down to and including the Fourth Report of the Registrar under the act, i. e., to March 31, 1911. The present article is intended to cover the entire operations of the act from the date when it became effective, March 22, 1907, to October 31, 1915, a period of somewhat over eight and a half years.

It may be briefly noted that the act applies to all public utilities, including municipal service corporations, transportation companies of all kinds, and occupations (like stevedoring) subsidiary to transportation, and also to coal mines and to metal mines. In these industries and occupations it is unlawful for employers to lock out their workmen or for employees to strike until an investigation of the causes of the dispute has been made by a Government board appointed for this particular case and the board's report has been published. After the investigation is completed and the report made, either party may refuse to accept the findings and start a lockout or a strike. The investigating board usually tries by conciliation to bring the parties to an agreement, so that the functions of the board considerably exceed those of a body appointed solely to procure information.

The law does not aim at compulsory arbitration or to force men to work against their will after all chance of an amicable settlement has disappeared. Neither employer nor employee is compelled to become party to a bargain he does not voluntarily accept. The purpose of the act is limited to discouraging strikes and lockouts in industries which immediately serve the entire public and to preventing the cessation of such industries through the arbitrary or unwarranted acts of either employers or workmen. It seeks to enforce the right of the people who use railways and burn coal, for instance, to know on how just grounds, in case of an industrial dispute, they are deprived of so necessary a service or commodity.

The procedure and machinery for accomplishing this end are not complicated. In the industries in question any proposed change in working conditions affecting hours and wages, whether demanded by employers or workers, must be preceded by a notice of 30 days before

the date on which such changes are to become effective. If such a contemplated change, or if any other point at issue between the parties, threatens to end in a strike or a lockout, either party may apply to the Dominion Labor Department for a board of conciliation and investigation, and may not alter the conditions of work until the dispute has been dealt with by the board.

Application forms are supplied by the labor department, although it is not necessary that applications be made on these forms. The application must be accompanied by a statement setting forth the parties to the dispute; the nature and cause of the dispute; an estimate of the number of persons affected; and a statement of the efforts made by the parties themselves to adjust the dispute. The law requires further that the application should be accompanied by a declaration stating that the necessary authority has been obtained by the declarant for the declaration of a strike in the event of failure to adjust the dispute or to refer it by the minister to a board of conciliation and investigation. In the Parliament of 1909-10 this last provision was so amended (May 4, 1910) as to permit a trade-union committee to exercise such power where a dispute concerned employees in more than one Province, so as to avoid the necessary expense and delay of securing authority from all parties concerned in the dispute.

In order that both parties to the dispute may be made acquainted with the proceedings taken under the act at the earliest moment possible and all unnecessary delay prevented, the applicant for a board is required to send to the other party concerned a copy of the application at the time it is transmitted to the department, and the second party to the dispute is similarly required to prepare without delay a statement in reply and to forward this to the department and to the other party to the dispute.

Upon the receipt of the application the minister of labor or his deputy appoints a board of three members, one upon the recommendation of the employers, another upon the recommendation of the workers, and a chairman selected either by the first two members of the board, or, in case they fail to agree, by the Government. If the workers or the employers, either through indifference or in order to block an investigation, refuse to recommend a representative for appointment, the minister of labor selects at his discretion a suitable person to fill the place. The members of the board are paid for the time they serve and for the necessary traveling expenses incurred. The Government also provides for necessary clerical expenses and for the fees of witnesses called for either party.

Each board controls its own procedure, which varies greatly under different chairmen and in different cases. Usually the most informa-

tion is obtained and the quickest settlements are made where the board discusses informally with committees representing both sides in joint session the various points at issue without laying much stress on technical evidence. Such informal meetings are apt to reveal sentiment, air grievances, and explain misunderstandings. But some boards, on account either of the judicial training of their members or of the technical character of the points at controversy, have conducted their proceedings like a law court. If the board succeeds in bringing the parties to an agreement, it embodies the terms of this agreement in its findings. But if it is unable to end the controversy it presents a report, or majority and minority reports, describing the conditions that cause the dispute and usually recommending what appear fair terms of settlement. The report or reports are at once published by the Government, and the employers and employees involved, if unable to agree, may then resort to the last measures of industrial warfare.

The penalty for causing a lockout before the board has reported is a fine upon the employer ranging from \$100 to \$1,000, and the penalty for striking, under like conditions, is a fine of from \$10 to \$50 upon each striker. Prosecutions are brought by the aggrieved party, not by a public officer.

During 1915 it was proposed to amend the entire act. The minister of labor prepared copies of a draft bill for distribution among those interested in order that he might receive the benefit of criticisms of it. The proposed revision of the law contemplates a consolidation of the Conciliation Act of 1906 and the Industrial Disputes Act of 1907, with all amendments and additions which may have been made since those dates.¹

The bill submitted by the department of labor aims to remove objectionable features and to remedy certain defects contained in the 1907 act. New matter relating to industrial agreements and more particularly to false representation has been added. Thus provision is made for registering industrial agreements. This requirement together with the prohibition against instigating strikes or lockouts in public utilities, where agreements are in force, are perhaps the most noteworthy changes proposed. It is, however, true that any party to such an agreement may be relieved from its operation by the report of a board acting under the law.

Making or publishing any verbal agreements, or false statements as to the opportunities for employment, the state of the labor market, the existence or nonexistence of any labor dispute, or as to anything else respecting any industry or employment which may, it is stated,

¹ The Labor Gazette, issued by the Department of Labor. Ottawa. September, 1915. pp. 304-328.

encourage any person to emigrate to Canada or to move from one part of the country to another to work in any industry, or to prevent any person from so doing, is forbidden under the proposed law under a penalty not exceeding \$1,000.

The latest report of the operations under the act declares that "many evidences reach the department of the continued and widespread interest taken in the operations of the Industrial Disputes Investigation Act, particularly by publicists and students of sociological problems."

During the period the act has been in force 187 applications were made under it and boards were granted in 165 cases. In 22 cases "adjustments have been effected without boards, in some cases after procedure for boards had been initiated." The following table shows the number of applications made, the number of boards appointed, and the number of cases in which adjustment was effected without a board, by calendar years, March 22, 1907, to October 31, 1915:

NUMBER OF APPLICATIONS MADE AND BOARDS GRANTED IN LABOR DISPUTES, AND RESULTS OF PROCEEDINGS HAD UNDER THE CANADIAN INDUSTRIAL DISPUTES, INVESTIGATIONS ACT, MAR. 22, 1907, TO OCT. 31, 1915.

Items.	1907 (9 mos.)	1908	1909	1910	1911	1912	1913	1914	1915 (10 mos.)	Total.
Number of applications.....	25	27	22	28	21	16	18	18	12	187
Number of boards granted.....	22	25	21	23	16	16	15	18	9	165
Number of disputes in which adjustments have been effected without boards.....	1	1	4	4	4	3	1	1	3	22

This table takes into consideration only the number of applications received during the year, and therefore will not in every case agree with the annual reports which include disputes carried over from the previous year.

The largest number of applications for the intervention of boards was made during the year 1910, while the largest number of boards granted during any year was in 1908. From 1910 there has been a somewhat steady decrease in the number of applications for boards in each year, followed by a proportionate decrease in the number of boards granted. For the year 1914 boards were granted in response to all applications made. This is the only year in which this occurred. During the whole period the per cent of boards granted of the number of applications has been 88.

The table which follows summarizes operations under the act from March 22, 1907, to October 31, 1915:

NUMBER OF BOARDS GRANTED, EMPLOYEES AFFECTED, STRIKERS IN ILLEGAL STRIKES AND IN LEGAL STRIKES, AND METHODS OF SETTLEMENT, BY INDUSTRIES, MAR. 22, 1907, to OCT. 31, 1915.

[Source: Reports of the registrar of boards of conciliation and investigation; the Labor Gazette, issued by the Canadian Department of Labor. In all cases reporting persons affected or involved as ranging from a minimum to a maximum, the median number has been used in computation. There were 2 disputes in railways, and 2 in other industries in which the number affected was not reported.]

Industries.	Disputes reported.			Boards granted.		Strikes.			
	Num-ber.	Persons involved.		Num-ber.	Persons involved.	Unlawful.		Not unlawful.	
		Di-rectly.	Indi-rectly.			Num-ber.	Persons in-volved.	Num-ber.	Persons in-volved.
Coal mining.....	42	43,188	1 475	37	39,888	2 7	2 15,545	4	6,330
Metal mining.....	13	3,075	2,470	13	6,525	.....	.....	4	2,820
Railways.....	72	76,506	77,863	58	142,966	3	17,800	4	11,539
Street railways.....	19	7,667	4,492	18	11,709	.....	.....	2	753
Shipping.....	10	6,560	1,855	10	8,415	2	2,100	.....	.....
Telegraph and telephone operat- ing.....	4	1,340	1,100	3	2,120	1	320	.....	.....
Municipal utilities.....	10	2,353	1,662	9	3,765	.....	.....	.....	.....
Light and power.....	3	266	2,514	3	2,780	.....	.....	.....	.....
Freight handling (railroad).....	2	950	.....	2	950	2	950	.....	.....
Teaming.....	1	300	.....	1	300	.....	.....	.....	.....
Other.....	11	3,284	4,780	11	8,064	.....	.....	3	2,700
Total.....	187	145,489	1 97,211	165	227,482	2 15	2 36,715	17	24,142

Industries.	Method of settlement.					
	By boards.		Amicably.		Other.	
	Number.	Persons affected.	Number.	Persons affected.	Number.	Persons affected.
Coal mining.....	2 27	24,598	10	7,560	4 5	11,505
Metal mining.....	8	2,600	2	2,490	5 3	455
Railways.....	2 46	92,887	21	42,438	6 5	16,044
Street railways.....	10	6,575	5	1,086	7 4	7 4,498
Shipping.....	2 8	7,415	2	1,000	.....	.....
Telegraph and telephone operat- ing.....	2	1,520	1	600	9 1	9 320
Municipal utilities.....	8	3,728	2	287	.....	.....
Light and power.....	2	2,750	1	30	.....	.....
Freight handling (railroad).....	2	950	.....	.....	.....	.....
Teaming.....	1	300	.....	.....	.....	.....
Other.....	11	8,064	.....	.....	.....	.....
Total.....	10 125	151,387	44	55,491	10 18	10 35,822

1 An indefinite number in 1 dispute.
2 Including one lockout.
3 No report received of acceptance of board's recommendations in 1 dispute.
4 Including 1 dispute settled by minister of labor; 1 mine closed down for lack of orders; 2 mines closed down as a result of strike after board reported; 1 mine went into liquidation; 7,910 persons were involved directly and, in 1 dispute, an indefinite number indirectly.
5 Including: 1 dispute, recommendations of board not accepted by employees, strike followed; 1 dispute, recommendations of board not accepted by employers, strike followed; 1 dispute, operations ceased.
6 Including 2 disputes settled by Government intervention, 1 by minister of labor, 1 method not reported, and 1 pending.
7 Including 2, method not reported; 1 through efforts of citizens' committee, and in 1 case the board was restrained by injunction. One dispute involved nearly all industrial workers in Port Arthur and Fort William, number of persons affected not reported.
8 One dispute settled by board in conjunction with fair-wages officer.
9 Through department conferences between interested parties.
10 See notes to details.

According to the above table 32 strikes have occurred during the period the act has been in operation, of which 15 were unlawful, having been begun either before or pending an investigation by the board; in 14 of the 17 cases which were not unlawful the recommendations of the boards were not acceptable and in 3 the strikes were begun in industries in which it is not unlawful to strike. In 125 disputes settlement was effected through the recommendations of the boards, and strikes or further cessation of work were therefore averted. The Government, the minister of railways, and the department have each effected a settlement after a board has been granted.

The operation of railways continues to exceed all other industries in making use of the act. Of the total number of disputes reported to the department 38.5 per cent were from this industry, while 35.2 per cent of the whole number of boards granted was due to these disputes. Of the entire number of persons directly or indirectly affected by disputes in which boards were granted 62.8 per cent were engaged in railway operations.

In the earlier years the coal-mine industry assumed importance next to the railways, but in recent years very few disputes in this industry have been referred to the department for action. In both of these industries, as well as in shipping, telegraph and telephone service, and in freight handling unlawful strikes have taken place.

SCIENTIFIC MANAGEMENT AND LABOR.¹

Under this title Robert Franklin Hoxie, assistant professor of political economy, University of Chicago, presents the results of his investigation conjointly with Robert C. Valentine for the employers and John P. Frey for the employees, which was conducted for the Commission on Industrial Relations. The final report of the commission summarizes the results of this investigation, and the conclusions of this summary are briefly stated in the digest of that report, published in the November issue of the MONTHLY REVIEW. The investigation took more than a year, but the 35 establishments studied in detail were covered during the period from January through April, 1915. This study was supplemented by interviews with scientific management leaders, experts, employers, and laboring men.

The investigation aimed primarily to ascertain what scientific management meant in actual operation. Its scope, it is pointed out, is to be determined by what is found actually to exist in shops where it is applied, as compared with what may be presumed theoretically to characterize the system. The possible benefits of the system are

¹ Scientific Management and Labor, by Prof. Robert Franklin Hoxie. New York, D. Appleton & Co., 1915. vii, 302 pp.

emphasized, and its actual results and its relations to labor welfare are considered in detail. An effort is made to present in a concise manner the main points at issue between scientific managers and organized labor.

The contrasting claims of organized labor and scientific management are presented in two appendixes; six other appendixes present the conclusions resulting from the investigation; the labor claims of scientific management as presented by Messrs. Taylor, Gantt, and Emerson; and the trade-union objections to scientific management. The questionnaire on which the investigation was based covers some 100 pages of the report. The report proper covers 139 pages. The whole volume contains 302 pages.

Because the Taylor system of scientific management is recognized as the original basic system, and because it is the system that organized labor has most generally and most vigorously opposed, Mr. Taylor's statement of the nature of scientific management and its relation to labor is taken as a standard for the purpose of the investigation.

The contrast in the claims as to benefits to be derived from the adoption of the system is best shown, perhaps, by the general definition of scientific management which each party accepts. Thus the advocates of the system claim that—

Scientific management is a system devised by industrial engineers for the purpose of subserving the common interests of employers, workmen, and society at large, through the elimination of avoidable wastes, the general improvement of the processes and methods of production, and the just and scientific distribution of the product.

On the other hand—

Organized labor understands by the term "scientific management" certain well-defined "efficiency systems" which have been devised by individuals and small groups under the leadership and in imitation of men like Frederick W. Taylor, H. L. Gantt, and Harrington Emerson, by whom this term has been preempted. Organized labor makes a clear distinction between "scientific management" thus defined and "science in management." It does not oppose savings of waste and increase of output resulting from improved machinery and truly efficient management. It stands, therefore, definitely committed to "science in management," and its objections are directed solely against systems devised by the so-called "scientific management" cult.

The proponents of scientific management claim (1) that it rests on the fundamental economic principle that harmony of interests exists between employers and workers and that high general wages and improved conditions of employment are compatible with low labor costs; (2) that it attempts to substitute in the relations between employers and workers the rule of exact knowledge in place of guess-work, and seeks to establish a code of natural laws equally binding upon employers and workmen; (3) that it is therefore both scientific

and democratic, for it has discovered and developed accurate scientific methods by which the laws governing the easiest and most productive movements of men at work are registered, and makes possible the rehiring of each workman on the basis of his efficiency; (4) "it substitutes the rule of law for arbitrary decisions of foremen, employers, and unions, and treats each worker as an independent personality"; thus scientific management democratizes industry by giving voice to both parties concerned and by substituting joint obedience of employees to fact and law for obedience to personal authority; (5) that it means greater productive efficiency, increasing output and improving qualities; (6) that it makes for labor welfare in that it sets each man at the highest task for which his physical and intellectual capacity fits him and tends to prevent the degradation and displacement of skilled labor, rewards men for helpful suggestions and improvements in methods of work, and encourages self-reliance. It raises wages and shortens the hours of labor, increases security and continuity of employment, lessens the rigors of shop discipline, promotes friendly feeling between the management and the men, and finally renders collective bargaining and trade unionism unnecessary as a means of protection to the workman. Thus "it tends to prevent strikes and industrial warfare and to remove the causes of social unrest."

Organized labor objects (1) that scientific management in its relation to labor welfare is a device employed for the purpose of increasing production and profits; (2) that it tends to eliminate consideration for the character, rights, and welfare of the employees. "In spirit and essence it is a cunningly devised speeding up and sweating system, which puts the premium upon muscle and speed rather than brains, and forces individuals to become 'rushers and speeders'"; (3) that it intensifies the modern tendency toward specialization of the work and the task; (4) that it tends to set the task on the basis of the records of the strongest and swiftest workers without due allowance for the human element or legitimate delay; (5) that it establishes a rigid standard of wages and offers no guaranty against rate cutting; (6) that it tends to lengthen the hours of labor and shorten the tenure of service, lessening the certainty and continuity of employment, tending to undermine the worker's health. "It puts into the hands of employers at large an immense mass of information and methods which may be used unscrupulously to the detriment of the workers, creates the possibility of systematic blacklisting, and offers no guaranty against the abuse of its professed principles and practices."

In its relation to industrial democracy labor claims that (7) scientific management is undemocratic in that it gathers up and transfers to the employing management all the traditional knowledge, judgment, and skill of the workers, monopolizing the skill of the workers in

connection with their work, by allowing the workmen ordinarily no voice in hiring or discharging, the setting of the task, and determining the wage rate or the general conditions of employment; by intensifying discipline; by tending to prevent the presentation of grievances on the part of the men and to increase the number of shop offenses and the amount of docking and fining; by refusing to deal with the workers collectively, thereby being destructive of collective bargaining.

Part II of Prof. Hoxie's book is devoted to a critical examination of scientific management in its relations to labor. Three general subjects are presented: (1) Possible benefits of scientific management to labor and to society, (2) Scientific management in practice, and (3) Scientific management and labor welfare.

Under the first head the author concludes that scientific management at its best affords opportunities for lower costs and increased production without adding to the burden of the workers in exhausting effort, long hours, or inferior working conditions, and thus creates real and substantial benefits to labor and to society.

It is also stated that scientific management, as set forth in theory by Mr. Taylor and as realized in practice, means the improvement and standardizing of the material equipment and productive organization of the plant before an attempt is made to apply its methods.

It is further asserted that scientific management points the way toward raising the standard of living for all classes of labor and for society at large and is in fact "efficient management" to which organized labor stands committed. Despite the fact that labor is inclined to evade the issue by declaring that these features belong not to scientific management but to "science in management," "the system at its best," declares the writer, "is not only a search for scientific productive methods, but is broad enough to include all that science in management demonstrates to be productively most efficient."

SCIENTIFIC MANAGEMENT IN PRACTICE.

Prof. Hoxie introduces the second division of Part II, "Scientific management in practice," by declaring that scientific management shops in organization and methods, contrary to the common assumption, do not conform to all the ideals and models presented by the leaders. No single shop was found which represented fully and faithfully, in matters of detail or in the more essential features, either the Taylor, Gantt, or Emerson system. This diversity was found to begin with the initial act of installation and to extend throughout the entire application of the system in use.

The system in practice is discussed by the author under the heads of (1) Functional foremanship; (2) Methods employed in the selection and hiring of workmen; (3) The character, extent, and results of attempts at adaptation, instruction, and training of the workers;

(4) Time study and task setting, their purposes, methods, and results; (5) Rate making; (6) Protection of workers from overexertion and exhaustion; (7) Opportunities for advancement and promotion; (8) Modes of discipline; (9) Modes of discharge and length of service; (10) Scientific management and industrial democracy; (11) Causes of the shortcomings of scientific management in practice.

FUNCTIONAL FOREMANSHIP.

Under the system of scientific management so-called functional foremanship is substituted for a military type of organization, i. e., bosses are appointed to supervise the tasks and duties of the men in connection with their particular job as distinguished from bosses which look after gangs of men under the old form of factory management. The author found that some shops had not seriously attempted the installation of functional foremanship, and in many instances where it had been adopted it was in such a modified form as to weaken materially the claim that scientific management treats every workman as an independent personality, substituting "joint obedience to fact and law for obedience to personal authority."

METHODS EMPLOYED IN THE SELECTION AND HIRING OF WORKMEN.

No evidence was found to justify the claim that scientific management makes possible the scientific selection of the workers. In fact, the methods of selecting and hiring employees in shops of this kind were found to differ in no essential respect from those which are characteristic of the ordinary run of industrial establishments.

CHARACTER, EXTENT, AND RESULTS OF ATTEMPTS AT ADAPTATION, INSTRUCTION, AND TRAINING OF THE WORKERS.

The claim that scientific management solves completely the problem of adaptation and adequate training of the workers was not substantiated by the investigation, which showed that scientific management in practice varies with the special conditions found in different industries and with the special motives and exigencies which determine the policies of different shops. The system eliminates apprenticeship it is claimed, for scientific managers declare a preference for the one-job man or machine specialist over the all-round workman. However, all workers in scientific management shops are not narrow specialists, nor is it the design to have them so.

TIME STUDY AND TASK SETTING: THEIR PURPOSES, METHODS, AND RESULTS.

Time study and task setting constitute one of the vital points in the controversy between scientific management and organized labor, and in order to make the matter intelligible a detailed account of the normal method of making time studies is presented:

After the job or task in question has been standardized, it is analyzed by the time-study man into its elementary parts or motions. These are set down in sequence

in which the movements or elementary operations are to be performed with spaces after each in which to record the actual time taken in a succession of tests. One or more workers are then selected for timing and instructed to do the work or job in accordance with the sequence of elementary operations or movements thus established and at a certain general rate of speed. The job is thus done, the time-study man, watch in hand, observing and setting down the time taken for each element. This process is repeated until the time-study man is satisfied that enough readings or performances of the operation have been observed and recorded for the purpose in hand. The successive readings or amounts of time taken in the case of each elementary operation are then studied and a final figure determined and set down which is called the "necessary time" for the element or the time which "should be taken." These "necessary" elementary times are added and the total is the "necessary time" for the whole operation. This, however, is not all the actual time allowed. To it are now added one or more "allowances." If the operation is strictly a hand job, one allowance only will probably be made to cover "fatigue," "necessary delays," "human necessities," and possible errors in the work of the observer. If the work is a machine job, a second allowance may be made to cover machine delays, breakdowns, etc. The final time set as the result of the study, to stand as the task time, or as representing 100 per cent efficiency, is the "necessary time" plus the allowance or allowances.

"Far from being the invariable and purely objective matters that they are pictured," the author asserts, "the methods and results of time study and task setting are, in practice, the special sport of individual judgment and opinion, subject to all the possibilities of diversity, inaccuracy, and injustice that arise from human ignorance and prejudice." Proceeding with the general statement that time study may be used primarily for the study, improvement, and standardization of the methods of doing work under observation, altogether without reference to a standard time for its accomplishment, or it may have for its main or sole purpose the fixing of a definite task time or efficiency scale, it is pointed out that great possibilities of advantage both to the employer and the workman exist in time study employed for the purpose first named. However, in a large number of shops time study for this purpose had been practically neglected. In connection with the second purpose—setting of task time or efficiency scale—great variations were noted, and especially the part which individual judgment and individual prejudice may and do play. The author lists 17 different factors wherein the judgment of employers, time-study men, or the workers may be exercised so as to produce variations that will alter the task itself.

Summarizing the results of the investigation so far as this subject is concerned, the author reaches the conclusion that time study and task setting, although carefully and liberally applied, seem bound to be a source of considerable injustice and irritation to the worker, and that under present conditions there is little reasonable ground for the sweeping labor claims of scientific management based on time study as a method of task setting and efficiency rating.

RATE MAKING, MODES OF PAYMENT, AND THE MAINTENANCE OF RATES.

The author calls this question "the storm center" of the scientific management movement.

Scientific management claims that the current methods of determining and paying wages are unscientific, unjust, and destructive of efficiency. Two distinct matters are presented for consideration in this connection. Systems of wage payment under scientific management involve two elements: The base rate, sometimes called "day wage," and the added "efficiency payment." The former constitutes the minimum earnings and indicates the general wage level for a group of workers, while the latter represents additional rewards for special efficiency. The base rate is either the day rate or a piece rate established for an occupation, operation, or group of workers. To be scientific and just the base rate, whether a time rate or a piece rate, must equal the value of the product created by the worker, or it must reward all workers in exact proportion to the skill and energy which they expend. But there appears no way of determining how the value and energy expended by the blacksmith, for instance, upon his work in relation to the capital by which he is aided compares with that expended by a school-teacher in relation to the capital by which the latter is aided. Economic science has not solved that problem, nor does scientific management offer any solution, the author declares.

Three systems of rate making are discussed by the author in this connection, namely: (1) The differential piece-rate system of Taylor; (2) The task and bonus system of Gantt; (3) the Emerson system, establishing an efficiency scale paralleled by a bonus scale. The differential piece-rate system gives a higher rate of wages to the worker when he is able to cut down the time required to turn out the required number of pieces of work. Workers who fail to reach the standard set are paid by the piece for what they do, just as in the case of the ordinary piece-rate system. But when a worker attains or exceeds the task set a new and higher rate becomes operative. The task or bonus system of Gantt also establishes a definite task on the basis of a time-study and a job analysis. The worker who makes the task does not have his piece rate raised directly, but receives an additional reward in the form of a bonus, in proportion to his ability to attain or surpass the standard set. A minimum day wage is guaranteed, which means a current wage for those who fail to make the task. Under both the Taylor and the Gantt systems the workman receives no additional bonus unless he actually attains the standard set.

It is this latter feature which the Emerson system of a minutely graded efficiency scale aims to correct. Under his system the so-called actual efficiency of the worker, and so the premium to which he is entitled, is determined by comparing the standard time, already

determined by a time study and a job analysis, for turning out a given amount of work with the actual time taken to do the work. The formula is: Standard hours ÷ actual hours = efficiency per cent.

A careful analysis of all these systems by the author indicates that they do not reward the worker in proportion to his efficiency, as is claimed. In the Taylor system there was found to be a sharp variation in payment for a slight variation in efficiency; the same was true of the Gantt system, and less so of the Emerson system. None of them propose any scientific method of determining the current day wage or basic rate. In all, the efficiency standard or task set is fixed quite arbitrarily.

Such are the systems of payment devised by the leaders of the schools of scientific management under consideration. None of them, except the differential piece rate, makes it clear that scientific management intends to purchase labor by specification. All of them definitely belie the claim that scientific management pays workers in exact proportion to their efficiency. One of them has the obvious intent of weeding out the lower grade of workers, while the other two are so constituted as to make such workers very unprofitable to the employers. Two of them may lend themselves to the exploitation of mediocre workers—those who can deliver a medium output, but can not attain to a standard task set high. All of them furnish a strong stimulus to high efficiency and output, but in themselves furnish no apparently effective check on overspeeding and exhaustion.

THE PROTECTION OF WORKERS FROM OVEREXERTION AND EXHAUSTION.

It is claimed by scientific management that protection to workers from overexertion and exhaustion is offered by various means, among which may be mentioned standardization of equipment and performance, substitution of exact knowledge of men and of machines for guesswork in the setting of the task and the determination of the hours and other conditions of work, careful studies of fatigue, maintenance of the best method of performing work, the best tools and materials at the proper time and place, instruction of the workers in the most economical and easiest methods of performing operations, institution of rational rest periods and modes of recreation during working hours, and surrounding the workers with the safest and most sanitary shop conditions. The investigation, however, showed that in practice most of these claims are unfounded. For example, it was found that scientific management has not materially affected the length of the working day; that the plan of scientific fatigue studies was not found in operation in a single shop.

Concluding, the author declares that the facts in no wise justify the assumption that scientific management offers any effective guaranty against overspeeding and exhaustion of workers, and that there appears to be "nothing in the special methods of scientific management to prevent speeding up where the technical conditions make it possible and profitable, and there is much in these methods to induce it in the hands of unscrupulous employers."

OPPORTUNITIES FOR ADVANCEMENT AND PROMOTION.

Claims to this effect are only partially true, it was found, although there is a basis for the claim, when the principle is ideally applied, which would justify the conclusion that "it seems reasonable to conclude that, fully and properly applied, scientific management surely and speedily separates the efficient from the inefficient workers, and affords speedier and more certain promotion and advancement to the former than management of the ordinary kind."

MODES OF DISCIPLINE.

The author thinks that scientific management does lessen the rigors of discipline as compared with other shops where the management is autocratic, on the ground that each worker is set a simple and definite task and is stimulated by the method of payment to do his best in the prospect of individual gain. Conditions in the shops visited seemed to favor the scientific-management contention.

METHODS OF DISCHARGE AND THE LENGTH OF SERVICE.

Little evidence was gathered to show that the situation as respects methods of discharge and length of service is different from that existing in shops which have not adopted scientific management. It is indicated, however, that the unions have a legitimate basis for complaining that discharge is generally a matter of arbitrary managerial authority. General industrial conditions rather than scientific management, perhaps, determine continuity of service.

SCIENTIFIC MANAGEMENT AND INDUSTRIAL DEMOCRACY.

On this point the following summary is quoted:

In practice, scientific management generally tends to weaken the competitive power of the individual worker and thwarts the formation of shop groups and weakens group solidarity; moreover, scientific management generally is lacking in the arrangements and machinery necessary for the actual voicing of the workers' ideas and complaints, and for the democratic consideration and adjustment of grievances. Collective bargaining has ordinarily no place in the determination of matters vital to the workers, and the attitude toward it is usually tolerant only when it is not understood. Finally, unionism, where it means a vigorous attempt to force the viewpoint and claims of the workers, is in general looked upon with abhorrence, and unions which are looked upon with complacency are not the kind which organized labor in general wants, while the union cooperation which is invited is altogether different from that which they stand ready to give. In practice, scientific management must, therefore, be declared autocratic; in tendency, a reversion to industrial autocracy, which forces the workers to depend upon the employer's conception of fairness and limits the democratic safeguards of the workers.

CAUSES OF THE SHORTCOMINGS OF SCIENTIFIC MANAGEMENT IN PRACTICE.

These, the author points out, are in substance as follows:

(1) The persistent attempt on the part of experts and managers to apply scientific management and its methods outside of their natural sphere.

(2) It offers its wares in the open market, but has developed no means by which it can control the use of these by the purchaser. In efforts to systematize industry the arbitrary will of the employer and the law of economy often operate to handicap the systematizer in carrying out his plan and purposes and contribute to the existing diversity, incompleteness, and crudity of scientific management as it is practiced.

(3) The existence and practice of self-styled scientific management experts, systematizers, and time-study experts who lack in most respects the ideals and training so essential to fit them for the work which they claim to be able to do.

(4) On the whole, and barring some notable exceptions, the sponsors and adherents of scientific management—experts and employers alike—are profoundly ignorant of very much that concerns the broader humanitarian and social problems which it creates and involves especially as these touch the character and welfare of labor.

In the concluding section of the report the author discusses the problem of scientific management and labor welfare and concludes that scientific management furthers the modern tendency toward specialization of the workers; that the system tends to break down existing standards of uniformity set up by the workmen and to prevent the establishment of suitable conditions of work and play; that if fully and properly applied it inevitably tends to a constant breakdown of the established crafts and craftsmanship and the elimination of skill except for the lower orders of workmen; that it makes possible the breakdown of the basis of present-day unionism in its dominant form and renders collective bargaining as now practiced impossible in any effective sense; that the system seems to be making the relatively unskilled more efficient than ever before, but, although unskilled labor may be receiving greater earnings than ever before under it, the gathering up and systematization of the knowledge formerly in possession of the workmen has a tendency to add to the strength of capitalism; that scientific management can not be said to make for the avoidance of strikes and the establishment of industrial peace.

What is really needed is not so much repression and direct control as social supplementation and increased knowledge. The main demands are for a frank recognition of the trend of events and for some method of putting back into the worker's life the content which he is losing as the result of increased specialization and the abandonment of the old apprenticeship system. The development of such a method will, of course, take time. In the meanwhile we need more thorough study and general publicity concerning the true character, policies, and methods of scientific management, its possibilities, responsibilities, and limitations; concerning the real character, intelligence, and spirit of those engaged in its application, the qualities and qualifications required by the best social standards for the exercise of this power and responsibility, and the progressive education of scientific management experts and employers, labor and the public, to the needs and requirements of the situation.

The conclusions resulting from the investigation, signed by Messrs. Valentine and Frey, as well as the author, and submitted to the Commission on Industrial Relations, embrace the following:

Two essential points stand forth. The first point is that scientific management, at its best and adequately applied, exemplifies one of the advanced states of the indus-

trial revolution which began with the invention and introduction of machinery. Because of its youth and the necessary application of its principles to a competitive state of industry, it is in many respects crude, many of its devices are contradictory of its announced principles, and it is inadequately scientific. Nevertheless, it is to date the latest word in the sheer mechanics of production and inherently in line with the march of events.

Our industries should adopt all methods which replace inaccuracy with accurate knowledge and which systematically operate to eliminate economic waste. Scientific management, at its best, has succeeded in creating an organic whole of the several departments of an institution, establishing a coordination of their functions which had previously been impossible, and in this respect it has conferred great benefits on industry. The social problem created by scientific management, however, does not lie in this field. It is in its direct and indirect effects upon labor that controversy has arisen, and it was in this field that the investigation was principally made. For the present, the introducers and appliers of scientific management have no influences to direct them, except where labor is thoroughly organized, other than their ideals, personal views, humanitarianism, or sordid desire for immediate profit with slight regard for labor's welfare.

The second point is that neither organized nor unorganized labor finds in scientific management any adequate protection to its standards of living, any progressive means for industrial education, any opportunity for industrial democracy by which labor may create for itself a progressively efficient share in management. And, therefore, as unorganized labor is totally unequipped to work for these human rights, it becomes doubly the duty of organized labor to work unceasingly and unswervingly for them, and if necessary to combat an industrial development which not only does not contain conditions favorable to their growth, but in many respects is hostile soil.

Your investigator and his official experts are of the opinion that all the data focus in these two points, each in its own way equally vital, equally indestructible, and equally uncompromising. On the one hand, the right of investigation, perpetual desire and experiment to find new ways of doing things, knowledge, science, efficiency—all these—advance in the apparent nature of our world, sometimes with a beneficent front, sometimes as a Frankenstein, temporarily destructive of human rights. On the other hand, these very human rights are unquenchable, for in the long run they contain the very life of true efficiency itself.

RECENT REPORTS RELATING TO WORKMEN'S COMPENSATION AND INDUSTRIAL ACCIDENTS.

CALIFORNIA.

The report of the California Industrial Accident Commission for the year 1913 and from January 1 to June 30, 1914, reviews the results of the operations of the law commonly known as the Roseberry Act (chapter 399 of the Laws of 1911) for the calendar year 1913, and also of the superseding act of 1913, known as the Workmen's Compensation, Insurance, and Safety Act, from the time it took effect, January 1, 1914, to June 30, 1914.

During the first six months following the passage of the new act 26,958 persons under its protection sustained injuries of greater or less degree. All of these injuries were compensable, at least to the extent of receiving medical and surgical treatment, but of this number only 3,438 persons were entitled to disability indemnity in addition to their medical and surgical treatment. A significant fact is that of these 3,438 who were entitled to indemnity there were only 323 instances in which controversies arose.

The number of controversies referred to the industrial accident commission (successor to the industrial accident board under the Roseberry Act) was a little more than 10 per cent of the compensable cases. This the commission regards as a very high average and constitutes, probably, double the percentage of controverted cases that will be encountered when employers and employees have come to know thoroughly their rights and obligations under the act. The commission hopes within two years, as a result of a thorough familiarization on the part of employer and employees with the terms of the act, to reduce the percentage of controverted cases to 2 per cent of the compensable cases.

The attitude of the commission with regard to certain points of trial procedure and evidence raised by practicing attorneys is frankly stated. Sometimes members of the bar in the State are unable to reconcile themselves to a procedure wholly different from that which characterizes trials in courts. They feel that unless they are permitted to conduct a case before the commission exactly as they would before a court they and their clients are unjustly and tyrannically treated. However, the commission holds that it is not a court and that hearings before it are not trials, but are in fact, as the term implies, "hearings," conducted by the commissioner or referee, at

which attorneys are given opportunity to bring out any material fact which in the course of the inquiry may not have been elicited from witnesses. Perhaps in 75 per cent of the cases there is no occasion for any attorney to be present on either side. In short, the commission desires to afford an object lesson as to how to determine issues of minor consequence with reasonable certainty, speedily, and without burdensome expenditure. But in issues of great importance the advice of attorneys will be welcomed.

The statute particularly provides that the commission shall not be bound by the technical rules of evidence in conducting its hearings. The commission permits itself to hear evidence that no court would permit a jury to hear, because it has faith in its ability to value such evidence, whether hearsay or not, at its true worth. The commissioners expect to be convinced by such evidence as in the common and practical affairs of everyday life would produce conviction in the minds of reasonable men and this is the standard that has been set for determining all issues. If the courts and the legislature will permit the commission to pursue this policy, it believes that substantial justice will be reached in practically all cases, with a minimum cost in time and money on the part of the State, employer, and employee.

The Workmen's Compensation, Insurance, and Safety Act defines permanent total disability and provides that in all cases of permanent partial disability the percentage of such partial disability to total disability must be determined by taking into account the nature of the physical injury or disfigurement, the occupation of the injured employee, and his age at the time of the injury.

The problem of devising a schedule or series of tables to be used in determining these percentages or ratings was intrusted to the permanent disability rating department, which after extensive investigation, inquiry, and research evolved a schedule that will answer practically all questions. In case of permanent injury it is possible to obtain a rating by consulting the schedule after determining three items: (1) The exact nature of the physical injury or disfigurement; (2) the occupation; and (3) the age of the worker at the time of the injury. The schedule is easy to apply and has apparently solved the problem of making settlements without the formality of hearings for the adjustment of claims before the industrial accident commission. (There are not more than two pages of explanations and almost any person can be instructed in its use in a few moments.) Instead of placing a fixed valuation on the different members of the body, the schedule actually considers the effect of the loss of earning capacity of the individual by including in the method of determination a discussion of all the vital factors which are capable of measurement, namely, the items of physical loss, occupation, and age.

In devising the schedule, an occupation and an age were adopted as standards by which to judge all other ages and occupations. The

ordinary unskilled laborer and the age 39 were taken as the standards. This occupation was taken because of the simple nature of the physical requirements placed upon different parts of the body by reason of the work performed. The age 39 was taken because statistical records show this to be the approximate average age of persons injured in California. In the study of functional loss and loss of competing ability, a list of some 300 permanent injuries was drawn up and submitted to the various State commissions and to prominent medical men in California, with a request for estimates of the effect of these injuries on the earning capacity of the standard man. With all of this material on hand a standard rating was created.

The permanent disability rating department exists to-day for the twofold purpose: (1) Of collecting and distributing further information concerning permanent disability, and (2) of approving permanent disability ratings which are made by parties concerned and submitted to the commission for approval. The department has investigated further classification of injury groups and some 800 new occupations, which information is now available to all who may apply.

Upon request by the industrial accident commission, a medical department was developed, partly to conduct the medical business of the commission, and partly to contribute to the smooth operation of the act by assisting organizations and individuals outside of the commission in medical matters pertaining to the law. While the commission has adopted a comprehensive "schedule of disabilities," it found it practically impossible to make any schedule complete, since the possible combinations of disability are almost unlimited. It was necessary in a large proportion of cases to have special consultations regarding the disability and to rate each case upon its merits.

The published rates for compensation insurance in California are roughly estimated at two and one-half times the former rates for employers' liability insurance. But in this comparison the commission directs attention to the fact that the rates for the latter form were based upon standard limits of \$5,000 for injury or death of one person, and \$10,000 for any one accident involving injuries or death of two or more persons, while the rates for compensation insurance provide covering for the unlimited liability of the employer. In estimating the real difference in the cost of liability and compensation insurance, account should be taken of all economies under compensation, such as increase in efficiency, saving of time and attorneys' fees, and the employers' proportion of expensive litigation. When all advantages under compensation are considered, the commission doubts whether there is any material difference, as compared with liability insurance, in the ultimate and actual cost to the employer.

The State compensation insurance fund as created in California competes with other licensed insurance carriers. It operates under the jurisdiction of the industrial accident commission, but conducts its business in a similar manner to other insurance carriers. The fund began business on January 1, 1914, with an appropriation of \$100,000 by the legislature. An additional sum of \$68,000 was appropriated for the use of the commission in defraying the initial expenses of the fund should it be unable to write a sufficient volume of business to pay this expense out of premiums received. However, the premium writings far exceeded the business expected.

The cost under policies of the fund is indicated in the financial statement by the amount expended for compensation and for medical and surgical attention, and by the liberally estimated cost of cases on which payments are still to be made. In California the theoretical pure premium cost is loaded about 30 per cent for medical aid. A suggested method of basing this charge more equitably is one involving accident frequency rather than the pay roll, as the cost of treating a worker earning \$5 per week averages the same as that for treating a worker earning \$20 per week.

The financial statement of the fund follows:

Statement of assets and liabilities June 30, 1914, of State compensation insurance fund.

ASSETS.	
Cash—	
State treasury	\$120,932.08
Bank	3,666.30
Office.....	75.00
	<hr/>
	124,673.38
Bonds	294,425.00
Accrued interest.....	4,996.55
Premiums in course of collection.....	8,971.32
	<hr/>
Total assets.....	\$433,066.25
LIABILITIES.	
Estimated cost of compensation and statutory medical payments for accidents reported ¹ ..	45,494.50
Unearned premiums	193,959.22
Bills unpaid.....	1,008.27
Return premiums unpaid	74.69
	<hr/>
Total liabilities.....	240,536.68
	<hr/>
Surplus.....	192,529.57
Appropriation, chapter 180, statutes 1913	100,000.00
Accumulated surplus 6 months ending June 30, 1914 ¹	92,529.57
	<hr/>
Total surplus	192,529.57

¹ If the statutory reserve (required for an annual report) of 72 per cent of earned premiums is used, the legal reserve would be increased to \$104,130.63. This would reduce the accumulated surplus for the six months to \$33 893.44, and the total net surplus, including appropriation, to \$133 893.44.

Statement of cash receipts and disbursements, January 1, 1914, to June 30, 1914, of State compensation insurance fund.

RECEIPTS.

Net cash actually received for premiums.....	\$370, 305. 70
Less—	
Premiums in course of collection.....	\$8, 971. 32
Return premiums paid.....	2, 944. 49
Return premiums unpaid.....	74. 69
	<hr/>
	11, 990. 50
Net cash actually received for premiums.....	370, 305. 70
Interest received.....	325. 00
Appropriation, chapter 180, statutes 1913.....	100, 000. 00
	<hr/>
Net receipts.....	470, 630. 70

DISBURSEMENTS.

General—		
Expense.....	\$6, 350. 30	
Salaries.....	13, 033. 05	
	<hr/>	19, 383. 35
Claims department—		
Compensation.....	\$8, 783. 38	
Medical.....	12, 844. 50	
	<hr/>	21, 627. 88
Salaries and expenses.....	7, 670. 30	
	<hr/>	
Total.....		29, 298. 18
		<hr/>
Net disbursements.....		48, 681. 53
Excess net receipts over net disbursements.....		421. 949. 17

The Workmen's Compensation, Insurance, and Safety Act gives the industrial accident commission power, under sections 51 to 72, inclusive, to make and enforce safety orders, rules and regulations, to prescribe safety devices, to fix safety standards, and to order the reporting of accidents. The same sections also provide for the review of the safety orders of the commission by the courts and for the establishment of museums of safety. More than 100 exhibits are on display in the safety museum established in San Francisco.

In providing safe conditions of employment in the mining industry the United States Bureau of Mines cooperated with the industrial accident commission. Forty-eight mines were visited during the six months, January 1 to June 30, 1914, and 282 safety suggestions made, affecting approximately 3,601 employees.

The reporting of accidents during 1913, as required by the industrial accident board, extended only to those which caused disability lasting more than seven days, and not including employees engaged in horticulture, farming, and similar pursuits. Accidents to the number of 12,031 were reported during 1913, of which 890 resulted in permanent injury and 555 resulted in death. Indemnity for temporary injuries amounted to \$395,824.83; for permanent injuries to

\$144,911.63, and for fatal injuries to \$183,546.15, making the total paid to employees \$724,282.61, or \$60.20 for each case reported. The expenditure for medical aid was \$147,700.99.

The average age of those killed was 39 years, and the average wage was \$18.78 per week. Figures as to average medical and compensation costs are not given, because information concerning payments of claims, medical, and burial expenses is not available in the majority of death cases.

Of the 698 cases of permanent injury, 381 were of such character as not to involve reduced earning capacity and were compensable on the basis of time lost in the same manner as temporary injuries. The average loss of time was 40 days. Settlements made in 240 cases amounted to \$40,564.39, or an average of \$169 per case. Medical expense in 258 cases amounted to \$15,357.77, or an average of \$59.52 per case. Of the 25,991 cases of temporary injury, only 3,438, or 13.23 per cent, were compensable cases, i. e., cases in which the disability extended beyond 14 days. Compensation paid in 2,991 cases amounted to \$110,511.25, or an average of \$36.94 per case.

Since January 1, 1914, 3,019 farmers, 484 employers of domestic labor, and 344 employers of casual labor have voluntarily accepted the provisions of the workmen's compensation, insurance, and safety act, bringing under its protection about 30,000 laborers.

Beginning January 1, 1914, the reporting of accidents as required by the industrial accident commission (successor to the industrial accident board) has extended to every employer of labor in the State, including domestic, farm, and casual labor, and including accidents causing disability lasting one day or more. The employer is required to make report within 7 days from date of accident, the attending physician within 10 days, and the insurance company within 14 days. A supplemental or final report is required of the employer and insurance company, but not from the physician except in case of death. The first supplemental report is due from the employer within 30 days after the accident and every 60 days thereafter until disability ends, at which time a final report is required from the insurance company.

During the six months ending June 30, 1914, 26,958 industrial accidents were reported to the commission. Of this number 5,837 were compensable, and compensation was allowed or paid in 3,250 cases, involving a total of \$187,183.53 paid by employers and casualty companies. This is an average of \$57.59 per case compensated. Medical aid amounting to \$155,157.87 was paid in 9,363 cases, or an average per case of \$16.57, and this does not include 7,135 cases where medical attention was provided by contract or company doctors. Of the total number of accidents reported, 25,991 resulted in temporary injury, 698 in permanent injury, and 269 in death.

MASSACHUSETTS.¹

The Massachusetts Legislature of 1914 by its resolve, chapter 160, provided for the appointment of a commission "to investigate the practices of insurance companies and their rates in workmen's compensation insurance and other insurance, with a view to determining whether or not any monopoly or combination exists in the insurance business; also whether the rates charged by insurance companies for workmen's compensation insurance and other insurance are reasonable, and to what extent government regulation of insurance rates is desirable."

Owing to limitations of time and funds, the commission confined its activities to a consideration of the subjects named in so far as they relate only to workmen's compensation insurance. The report is embodied in a pamphlet of some 90 pages, and discusses chiefly the questions of monopoly, reasonableness, and government regulation. A brief account is given of the underlying principles of workmen's compensation, and of the movement which resulted in the enactment of a law on this subject in Massachusetts. As originally drafted, and passed by the lower house of the State legislature, the insurance contemplated by the act was to be written exclusively by a mutual insurance corporation under the name of the Massachusetts Employees Insurance Association. The senate, however, amended the act so as to permit all liability insurance companies to write compensation insurance. At the date of the report (Apr. 22, 1915) there were 28 insurance companies authorized to write compensation insurance in the State. Though the act is elective, 85 per cent of the persons nonfatally injured between July 1, 1913, and June 30, 1914, were within the act, while of those fatally injured 72½ per cent were within the act. The experience on which the report is chiefly based is under the act as originally passed, an amendment which went into effect October 1, 1914, making changes which increased the benefits approximately 40 per cent over the provisions of the original act. This, of course, considerably affects the premium rates necessary to maintain a safe margin of insurance.

Taking up first the question of monopoly, the commission found that in the sense that a single company or a group of companies transacted all the business of this kind in the State, there was no such thing as monopoly, and yet found that there was an agreement between nearly all the stock companies writing insurance in the State "giving one man full authority to change compensation rates in Massachusetts alone for competitive purposes—a situation which is indefensible." It was found that practically all the companies were

¹ Report on Workmen's Compensation Insurance of the Commission to Investigate Practices and Rates in Insurance. Boston, 1915. 92 pp.

members of the Workmen's Compensation Service Bureau of New York, the others following the rates made by it, the sole exception being the Massachusetts Employees Insurance Association. The history of this service bureau is briefly traced, as well as the methods used in arriving at the rates promulgated by it. These methods were, in the absence of statistical data, necessarily experimental and subject to revision when the accumulation of material should enable a more accurate determination of rates.

As a result of disagreement over rates the members of the New York bureau authorized a single man to make such revision in Massachusetts as he should approve. Under this grant of authority changes affecting about 800 classifications were made and rates reduced, on the whole, about 15 per cent. Four series of rates have been in effect at different times under the Massachusetts law, one providing for the inception of business July 1, 1912; a revision in effect February 15, 1913; one in effect July 1, 1913; and the present rates as revised by the single insurance official effective on or before February 2, 1914. A table showing some of the principal classifications and rates at each of these periods discloses the very considerable reductions that have been made, though it is concluded that in some cases the reduction has been too extensive to meet safely the liabilities established by the amended law. On the basis of \$160 pay roll the rates for the respective dates named above were, for boot and shoe manufacturers, 80 cents, 56 cents, 40 cents, and 30 cents; for cotton and wool spinners and weavers they were 90 cents, 56 cents, 45 cents, and 35 cents; for street railway companies, electric (not interurban), \$6.75, \$5.06, \$4.50, and \$2.20. Not all the reductions were so striking or continuous, carpenters on construction work being rated at \$3.50 originally and at \$2.62 for each succeeding period; contractors, wooden residences, etc., \$2.50 originally and \$1.87 for each succeeding period, etc. The rates of the Massachusetts Employees Insurance Association were originally drawn for it by an independent authority, but on February 15, 1913, these were withdrawn and rates similar to those adopted by the stock companies on that date were also filed by it. As matters now stand, most of the rates charged by this association are higher than those charged by stock companies. Being on a mutual or participating basis, a part of the premiums may be returned if the actual cost of the insurance permits it.

The question of reasonableness, next discussed, necessarily involves the elements of cost and the margin for expenses and profit. The elements entering into cost are considered and the method of computation is taken up, with considerable attention to the question of expense and particularly with reference to that of getting business. On the latter point it is concluded that inasmuch as insurance is

practically compulsory, and nearly every employer stands ready to secure insurance without solicitation, the services of canvassing agents merely as such are of small value and that the usual allowance of $17\frac{1}{2}$ per cent commission is unnecessarily large. It is said that the premium rates have in the past been obviously unreasonable, but that under the present terms of the law it is not so much a general reduction that is needed as an equalization of rates, so that each industry may contribute its proper proportion and none be excessively taxed. It developed from the evidence taken by the commission that employers in Massachusetts have saved over \$200,000 in premiums as a result of the rate reduction of February 2, 1914, and these are substantially the rates in effect today. It was also shown that the premiums earned by the insurance companies as a whole have been sufficient to pay all losses and provide for future contingencies and expenses.

It is maintained that the State has full power to regulate rates, a decision by the United States Supreme Court being cited in which the State's authority over fire insurance rates was broadly sustained, though it did not appear that the court would take the position that a company would be under obligations to write insurance at rates which it believed to be inadequate. The necessity of State supervision and regulation is affirmed with positiveness.

A portion of the report is devoted to consideration of a number of topics, as rate making, schedule rating, reserves, statistics, accident prevention, and reinsurance. The original dearth of data for accurate rate making is felt to be rapidly finding relief by reason of the wide experience afforded by such large industrial States as New York and others, although local conditions and special State provisions must always be given due consideration. A central rating bureau for the State is recommended, with power to (1) make the basic rates for all classifications of industries in the manual, approximately 1,500; (2) make inspections of individual risks, both for the determination of a proper classification and the assigning of a final rate on the basis of favorable or unfavorable facts disclosed by the inspection; (3) prevent discrimination in rates; and (4) hear appeals from employers dissatisfied with their rates. Emphasis is laid on the importance of schedule or merit rating, the uniform application of which is regarded as the most important function of a rate-making bureau. The principal aim of a workmen's compensation law is stated to be the prevention of injuries rather than their compensation, for the accomplishment of which schedule rating, uniformly applied, is declared the most powerful instrument. Testimony before the commission led to the conclusion that fully 50 per cent of accidents in Massachusetts and in the country at large can be prevented. One instance of a remarkable result in a highly developed campaign for

accident prevention is specifically cited, showing that in three years, 1911 to 1913, inclusive, 6,308 employees were saved from serious injury, representing a gross saving in casualty expense of \$4,775,-692.64. The expenditures for safety work during this period were \$2,003,712.29, making a net saving to the corporation of \$2,771,980.35. Other cases are given in which the saving in casualty expense has been from 22 to 70 per cent. The question of reserves is only tentatively discussed, the conclusion being that until experience accumulates the subject can not be definitely acted upon, though the tendency hitherto is found to have been toward underestimates. The importance of uniform statistics, and the practical necessity of reinsurance of catastrophe hazards, are touched upon. An outline is given as to what are regarded as essentials in a statistical presentation of the operations of workmen's compensation laws.

The concluding portion of the report presents a series of six bills recommended for enactment for the accomplishment of the purposes found by the commission to be desirable. These relate to the establishment of a rate-making bureau by the companies writing compensation insurance in the State, the supervision of such bureaus by State authorities, the approval of the forms of compensation insurance policies by the State insurance commissioner, the filing of liability rates and classifications with the commissioner, the prohibition of discrimination between insurers, and the reinsurance of compensation risks in other companies than those authorized to transact business within the State. So far as is known at the date of this publication but one of these recommendations resulted in the enactment of a law, that requiring that the forms of workmen's compensation insurance policies shall be subject to approval by the State insurance commissioner.

WASHINGTON.

The third annual report of the Washington Industrial Insurance Department for the 12 months ending September 30, 1914, reviews, in a pamphlet of 125 pages, the operations of the Workmen's Compensation Act from the day it took effect, October 1, 1911, to September 30, 1914. The report is made up of reports by the secretary of the three commissioners (constituting the industrial insurance department) and the chiefs of the audit, claim, medical, and statistical divisions.

The report of the chief medical advisor, constituting about 30 pages of the department's report, gives in text form the data with regard to 12,586 claims adjudicated under the terms of the act for the year ending September 30, 1914, and also discusses "peculiar claims with findings and results," "appeal cases," and "partial list of rejections."

During the year ending September 30, 1914, there were 15,089 accidents reported to the commission. Of this number 807 were found

to have no basis for compensation as provided under the act. The number so rejected, and the reasons therefor, are as follows:

197. Disability not result of accident.
188. Where the employment was in nonhazardous occupations not under the act.
165. Where the time loss was less than 5 per cent.
161. No proof that accident occurred in the course of employment.
66. Accidents received while not in the course of employment.
15. Claim not filed within the time limit of 1 year.
10. Compensated in full for time loss by employer.
5. Not paid because claimant settled with third party.

With a word of explanation, the foregoing second and third reasons for rejecting a claim may be better understood.

The act itself states that there is a hazard in all employment, but certain employments have come to be recognized as being inherently constantly dangerous, and it enumerated a list which, it states, is intended to embrace all such hazardous works and occupations, termed in the act "extra hazardous." What the list is may be seen from the financial statement showing condition of the accident fund to April 1, 1915 (p. 51). The act further states that if there be or arise any extra hazardous occupation or work other than those enumerated, it shall come under the act, and its rate of contribution to the accident fund, until fixed by legislation, shall be determined by the industrial insurance department.

As to compensation, the act states that none shall be paid unless "the loss of earning power shall exceed 5 per cent." In practice, the commission has interpreted this to mean $1\frac{1}{2}$ days, i. e., 5 per cent or one-twentieth of a month of 30 days.

The table following presents the principal figures compiled from the chief medical adviser's report concerning the 12,586 claims allowed for temporary total disability during the year ending September 30, 1914:

CLAIMS ALLOWED INVOLVING TEMPORARY TOTAL DISABILITY, AVERAGE DURATION OF DISABILITY, AND AWARDS, UNDER THE WORKMEN'S COMPENSATION ACT FOR THE YEAR ENDING SEPTEMBER 30, 1914.

Injury.	Claims allowed.	Permanent disability.		Average disability duration (days).	Average time loss award.
		Number of cases.	Total awards.		
Fractures.....	1,455	284	\$81,612.50	65.4	\$89.54
Amputations.....	461	461	107,862.50	43.6	62.58
Infections.....	743	45	6,837.50	20.7	27.96
Scalds and burns.....	286	9	5,925.00	21.7	30.88
Cuts.....	2,542	192	36,131.25	18.2	25.17
Sprains.....	1,234	28	5,250.00	23.2	33.12
Puncture wounds.....	503	18	7,837.50	14.8	21.06
Bruises.....	4,285	111	25,875.00	19.6	27.41
Multiple injuries.....	574	135	47,275.00	56.7	76.22
Dislocations.....	153	25	6,000.00	45.6	64.30
Unclassified.....	350	170	75,850.00	39.2	59.75
Total.....	12,586	1,478	406,456.25	28.4	39.42

This table, which does not show total disability duration or total time loss awards, includes all injuries which have been paid under the act, but does not include death claims and pensions. These 12,586 compensated injury cases represent a loss of 357,010 working days, or an average of 28.4 per case. The allowance for time loss aggregated \$496,154.43, or an average of \$39.42 per claim. There were 1,478 permanent disability cases during the year, with a disability award of \$406,456.25, or an average per claim of \$275. The total amount paid, including time loss and permanent disability awards, was \$902,610.68, or an average of \$71.72 per claim for the entire year. For the year ending September 30, 1913, the total average per claim was \$70.92, or only 80 cents less per claim. The permanent disability award for the fiscal year 1913 averaged \$287.49 per claim, or \$12.49 less in 1914 than in 1913.

The table following shows the number and per cent of the 12,586 cases of temporary total disability lasting each classified number of weeks:

NUMBER AND PER CENT OF TEMPORARY TOTAL DISABILITY CASES LASTING EACH CLASSIFIED NUMBER OF WEEKS, FOR THE YEAR ENDING SEPT. 30, 1914.

Duration of disability (weeks).	Temporary total disability cases.		Duration of disability (weeks).	Temporary total disability cases.	
	Number.	Per cent. ¹		Number.	Per cent. ¹
Under 1 week.....	1,816	14.8	15 and under 16.....	41	0.4
1 and under 2.....	3,138	24.9	16 and under 17.....	27	.2
2 and under 3.....	2,175	17.4	17 and under 18.....	118	.9
3 and under 4.....	1,262	10.0	18 and under 19.....	26	.2
4 and under 5.....	1,164	9.2	19 and under 20.....	29	.2
5 and under 6.....	555	4.4	20 and under 21.....	10	.1
6 and under 7.....	469	3.7	21 and under 22.....	77	.6
7 and under 8.....	277	2.2	22 and under 23.....	23	.2
8 and under 9.....	349	2.7	23 and under 24.....	19	.1
9 and under 10.....	150	1.1	24 and under 25.....	15	.1
10 and under 11.....	157	1.1	25 and under 26.....	74	.6
11 and under 12.....	91	.7	26 and over.....	201	1.6
12 and under 13.....	225	1.8			
13 and under 14.....	47	.4	Total.....	12,586	100.0
14 and under 15.....	51	.4			

¹ These percentages are taken from the report, and while they total 100 per cent, they are not accurate in individual cases.

There were 324 death claims filed for compensation for the year ending September 30, 1914. Of these, 87 were due to injuries to the head; 59 to injuries to the body, mangled or crushed; 37 to fracture of the spine; 28 to traumatic shock; 25 to drowning; 41 to hemorrhage and internal injuries; and the remainder to various other causes. Seventy-four claims from the previous year were unadjusted, making a total of 398 death claims. Of this number, 51 remained undisposed of on September 30, 1914. Pensions were awarded in 172 cases, which include 13 cases acted upon in the previous year and reopened. Thirty-two cases were rejected for cause and 156 were suspended because there were no dependents or they could not be found.

Apart from the department's annual report, the commission has issued a 40-page folder showing the condition of the accident fund from October 1, 1911, to April 1, 1915. Slightly condensed, the financial statement is as follows:

STATEMENT OF INDUSTRIAL INSURANCE COMMISSION OF THE STATE OF WASHINGTON, SHOWING CONDITION OF THE ACCIDENT FUND FROM OCTOBER 1, 1911, TO APRIL 1, 1915.

Industry.	Class.	Number of firms.	Number of workmen (estimated).	Total amount paid in.	Total amount paid out. ¹	Balance in fund.	Deaths requiring pensions.	Basic rate (per cent).	Average rates per annum per \$100 of pay roll for the 3 years 1912 to 1914.
Construction.									
Sewers and tunnels....	1	235	5,317	\$127,864.68	\$64,667.06	\$63,197.62	8	(²)	(³)
Bridges and towers....	2	138	2,512	70,114.37	52,163.00	17,951.37	7	(⁴)	(⁵)
Pile driving.....	3	90	643	28,775.51	26,753.14	2,022.37	3	(⁶)	(⁶)
General construction..	5	2,734	19,581	338,153.37	290,385.44	47,767.93	35	(⁷)	(⁸)
Electric, gas, and water works.....	6	370	4,702	197,582.99	118,814.47	78,768.52	26	(⁹)	(⁹)
Railroads.....	7	340	10,252	445,408.47	412,186.89	33,221.58	69	5.0	\$2.78
Street and road work..	8	710	18,523	195,930.35	133,883.06	62,047.29	17	(¹⁰)	(¹⁰)
Shipbuilding.....	9	20	542	30,863.95	20,610.79	10,253.16	2	(¹¹)	(¹¹)
Operations.									
Lumber, milling, etc..	10	1,972	63,282	2,010,052.82	2,002,671.18	7,381.64	243	2.5	1.875
Dredging.....	12	17	294	16,472.21	5,361.99	11,110.22	.....	5.0	1.39
Electric systems.....	13	143	2,815	84,182.74	61,324.01	22,858.73	12	4.0	2.33
Street railway.....	14	27	3,645	88,308.50	69,885.18	18,423.32	7	3.0	.75
Telephone and telegraph.....	15	70	478	27,242.49	19,365.83	7,876.66	4	3.0	1.50
Coal mining.....	16	52	6,905	394,812.95	384,640.87	10,172.08	54	3.0	2.167
Quarries and metal mines.....	17	220	2,268	85,914.01	87,329.14	¹² 1,415.13	13	3.0	1.83
Smelters.....	18	7	848	39,085.17	36,656.54	2,428.63	1	3.0	1.50
Gas works.....	19	12	476	12,820.79	7,646.02	5,174.77	1	3.0	.75
Steam.....	20	5	60	3,644.86	2,508.98	1,135.88	1	3.0	1.75
Grain elevators.....	21	226	2,227	33,700.05	30,354.38	3,345.67	1	2.0	.56
Laundries.....	22	179	2,935	20,021.68	18,777.99	1,243.69	1	2.0	.33
Waterworks.....	23	150	1,637	16,875.12	11,924.56	1,950.56	3	2.0	1.17
Paper mills.....	24	4	686	33,293.56	30,132.19	3,161.37	3	2.0	1.67
Garbage works.....	25	8	145	5,147.42	2,445.65	2,701.77	.....	2.0	.83
Factories.									
Woodworking.....	29	309	4,550	139,286.20	121,877.40	17,408.80	4	2.5	1.25
Cement manufacturing	31	108	1,350	38,133.66	35,321.66	2,812.00	7	2.5	1.46
Fish canneries.....	33	48	5,972	55,439.87	28,794.20	26,645.67	3	3.0	1.00
Steel manufacturing foundries.....	34	660	5,016	109,838.91	107,129.88	2,709.03	9	2.0	.78
Brick manufacturing..	35	52	1,410	19,506.16	13,421.76	6,084.40	3	2.0	.50
Breweries.....	37	83	1,067	30,042.69	17,497.42	12,545.27	1	2.0	.83
Textile manufacturing.	38	157	1,929	15,174.12	9,482.48	5,691.64	2	1.5	.375
Foodstuffs.....	39	106	1,796	11,449.61	11,260.83	188.78	1	1.5	.375
Creameries.....	40	108	736	5,869.53	2,793.58	3,075.95	.....	1.5	.21
Printing.....	41	370	2,275	12,873.62	7,285.17	5,588.45	.....	1.5	.10
Miscellaneous.									
Longshoring.....	42	90	2,593	86,389.80	83,892.20	2,497.60	7	3.0	2.25
Packing houses.....	43	33	594	19,833.94	12,155.85	7,678.09	1	2.5	.83
Ice manufacturing.....	44	63	405	11,380.05	6,476.30	4,903.75	.....	2.0	1.00
Theater employees....	45	24	147	2,076.76	297.10	1,779.66	.....	1.5	.50
Powder works.....	46	5	181	1,248.38	13,841.66	¹³ 12,593.28	9	10.0	.....
Creosoting works.....	47	9	176	5,753.38	3,930.40	1,822.98	.....	2.5	1.39
Nonhazardous elective.	48	57	717	7,160.42	6,821.88	338.54	1	1.35	.56
Total.....	.....	10,011	181,687	4,877,725.16	4,372,768.13	504,957.03	559	.....	.....

¹ This column is a consolidation of three columns shown in the statement, viz: Claims paid, with a total of \$2,872,213.64; reserve to pay pensions, with a total of \$1,464,670.99; and refund of excess contributions, i. e., to employers retiring permanently from business, total \$35,883.50.

² Various.

³ 61.11 per cent of basic rate provided in the act. Assessed rates are so expressed in this class because different rates are required on the several kinds of work listed.

⁴ 80.56 per cent of basic rate provided in the act. See note 3.

⁵ 55.56 per cent of basic rate provided in the act. See note 3.

⁶ 55.55 per cent of basic rate provided in the act. See note 3.

⁷ 41.67 per cent of basic rate provided in the act. See note 3.

⁸ Overdraft deducted from total cash balance. Act effective Oct. 1, 1911. Basic rates charged on full pay roll for October, November, and December, 1911.

The Washington State insurance plan is costing the Washington employers approximately \$1,000,000 annually, every cent of which goes to injured workmen or their dependents. It is costing the general taxpayers approximately 7 per cent of this amount annually to have the law administered. Liability companies admit that it costs them from 40 to 60 per cent to do business, the increased cost being due to agents' commissions, salaries, rents, etc. The difference in cost of doing business must of necessity be borne either by the employer in increased premiums or by the injured workman in decreased compensation.

The total number of accidents reported to April 1, 1915, was 49,256, disposed of as follows:

Final settlements (not including 550 claims reopened for additional awards).....	36, 127
Fatal cases.....	1, 038
Total permanent disabilities.....	31
Rejections for cause.....	2, 221
Suspensions, various reasons.....	8, 790
Claims in process of assembly and adjustment.....	764
Continued monthly payment.....	260
Partial payments on account of reduced earning power.....	25

During the same period the average award for nonfatal claims was \$75.60; the number of firms operating under the act was 10,011, these firms employing 181,687 persons.

Some amendments to the Workmen's Compensation Act were passed by the 1915 legislature, of which the following is a synopsis:

All delinquent payments to bear 12 per cent interest.

Every employer who shall enter into business on any intermediate day or who shall resume operations after final adjustment of his pay roll has been made shall furnish the department with an estimate of his pay roll before commencing such operations. Failure to comply with this provision subjects him to a severe penalty.

Attending physician may be compelled to testify before the court on appeal cases.

Commission may require claimants to submit themselves for medical examination. Refusal on the part of the claimant to submit to such an examination is sufficient cause for suspension of his claim.

Court is empowered to enforce the attendance of witnesses and the production and examination of books, papers, and records before the department.

Failure to comply with any rule of the department subjects the offender to a fine of \$250.

Report of accident must be made at once to the employer and to the industrial insurance commission.

Commission has the power to divide, rearrange, or consolidate any class or classes, making such adjustment or transfer of funds as it may deem proper.

The commission has ruled, effective June 1, 1915, that the operations of retail lumber yards, fuel yards, storage warehouses, or warehouses in connection with a mercantile establishment, transfer companies employing teamsters, truck drivers, handlers of freight, auto-truck drivers and helpers be declared within the scope of the act and listed in class 21 at a basic rate of 2 per cent.

WISCONSIN.

The Wisconsin statutes provide that every insurance company operating under the Workmen's Compensation Act shall make and file with the industrial commission an annual statement of its business and accident experience. The law also provides for the filing of various other reports. In addition, the commission requires a quarterly report of accident and compensation experience from employers carrying their own risk. A bulletin¹ has been compiled from these records and is also part of the commission's fourth annual report on workmen's compensation.

Some 12,000 employers, with approximately 160,000 workmen, are insured under the Wisconsin compensation act. These numbers represent 96 per cent of all employers and about two-thirds of all employees subject to the act. Insurance companies during 1914 collected approximately \$1,834,000 of compensation premiums and assumed liability for \$927,000 of compensation and medical aid—about three-fourths of all benefits paid or payable under the act.

The cost of compensation insurance to most employers is determined by insurance rates and comprises compensation benefits, including indemnity for accidental injuries and medical care of injured workmen, and the expenses of management or overhead cost of doing business. This form of insurance exists for the purpose of taking care of work injuries. The expenses of management are simply the middleman's cost of carrying indemnity and medical aid for injured workmen and their families.

The report emphasizes the economical management of mutual companies in the State. Five such companies organized under the laws of Wisconsin transacted 20 per cent of the total compensation insurance in 1914. These mutual companies provided insurance at actual cost, and the excess of premiums over compensation benefits and management expenses, amounting to 22 per cent, was returned to the policyholders. Their combined expense ratio in 1914 was 18

¹ Industrial Commission. Workmen's Compensation Insurance. Bulletin, issued June 1, 1915. 47 pp.

per cent of earned premiums. The greatest saving in expense as compared with other companies was effected in the adjustment of claims and in the selling cost. Claim adjusters received but 1 cent on the dollar of benefits, while those connected with stock companies received 12 cents. This, however, did not affect the prompt settlement of claims. Only 26 per cent of the indemnity incurred during the year was outstanding on December 31, as compared with 45 per cent for stock companies. Saving in selling cost was more noteworthy. Stock companies as a whole spent 18 per cent of premiums for agents' commissions alone, whereas one mutual company with a selling cost of only 4 per cent of premiums wrote more Wisconsin business by 50 per cent than any stock company. The commission expresses the belief that employers can solve the problem of economical insurance for themselves. Had all compensation insurance during 1914 been carried in Wisconsin mutuals it is stated that the net saving to employers would have been over \$500,000 of the premiums actually paid.

Stock or old-line companies wrote the great bulk—about 78 per cent—of compensation insurance in Wisconsin in 1914. Of 26 such companies, 20 were associated in the so-called bureau (formerly called "conference"), a combination which maintains uniform rates and uniform merit rating among its members. The bureau also provides joint statistical, actuarial, and engineering service for the purposes of rate making and accident prevention. Their combined expense ratio was 38 per cent of earned premiums and 79 per cent of compensation benefits.

Four interinsurance companies, commonly called "exchanges," operated during 1914. The subscriber at such an exchange receives insurance to a stated amount and becomes liable to a limited assessment, commonly twice the amount of his annual premium. Any excess of ordinary premiums over what is required to cover compensation claims and expenses of management is returned to the subscribers. But the subscribers (policyholders) have little or no voice in the management of the exchange and no control over the cost of operation. Business is transacted through a self-appointed manager, called attorney in fact, whose pay is a stipulated commission, usually 30 per cent of all premiums collected. His services consist mainly in soliciting subscriptions. The combined expense ratio of these exchanges in 1914 was 42 per cent of earned premiums.

The table following is presented as showing for each group of companies just what became of the employer's dollar.

RATIO OF EXPENSE, BENEFITS TO WORKMEN, AND SURPLUS OF EACH SPECIFIED GROUP OF INSURANCE COMPANIES IN WISCONSIN, 1914.

Company.	Adjustments.	Agents.	Other expenses.	Benefits to workmen. ¹	Surplus to policyholders.	Total per cent.
Wisconsin mutuals.....	8	4	6	60	22	100
Stock.....	6	18	14	48	² 14	100
Interinsurers.....	5	(³)	⁴ 37	39	19	100
Foreign mutuals.....	4	(³)	⁴ 33	66	⁵ 3	100

¹ Includes indemnities and medical aid.² To stockholders.³ Included in "other expenses."⁴ Including per cent chargeable to "agents."⁵ Deficit.

Under section 2394-24-2 of the Wisconsin statutes an employer may obtain exemption from the insurance requirement of the compensation act by making proper showing of his financial ability to carry his own risk. During the year 1914, 525 employers availed themselves of this provision. They employed 81,232 workmen, with an aggregate pay roll of \$53,461,687. The total cost of compensation for all classes together averaged 60 cents per \$100 pay roll. Making liberal allowance for merit rating, mentioned in the following paragraph, the net saving to these employers as compared with the cost of compensation insurance otherwise obtained exceeded \$500,000. In connection with this low cost of compensation insurance to employers carrying their own risk, the report notes that the bulk of the pay roll is represented by a relatively small number of large employers, and these latter, without exception, have through thorough safety organizations reduced accidents to the minimum. Under the Wisconsin law compensation for partial disability is 65 per cent of loss of earning power. Thus an employer who carries his own risk often finds it advantageous to put an injured man at some lighter task and pay him full wages before he is able to do full work at his regular occupation.

There are wide differences in hazard as between different establishments in the same industry. A modern planing mill, in thorough repair, with up-to-date equipment, safeguarded according to the most approved standards, with a live safety organization and a management interested in accident prevention, has a very much lower hazard than a planing mill which reverses these characteristics. Merit rating takes account of these facts. In lieu of one flat rate for an entire industry, it seeks to adjust the rate of each employer to the hazard of his particular establishment. This is done by a regular schedule of charges and credits for conditions which tend to produce or prevent accidents, thus through the insurance rates penalizing the careless employer and rewarding the careful one. The system was introduced in Wisconsin in the latter part of 1913.

In connection with merit rating the report mentions one bad practice that has grown up. Investigations made by the commission disclosed that liberal credits had been granted for superior orderliness, cleanliness, and safety organizations in plants where conditions exactly the reverse obtained. Merit rating on the whole operated to reduce insurance premiums, because the credits greatly exceeded the charges. The average reduction upon all risks, including contractors and others not subject to merit rating, was about 10 per cent.

As to insurance rates in Wisconsin, the law, recognizing the obligation of the State to protect employers against excessive charges and unfair discrimination, requires that every insurance company shall file with the industrial commission its risk classifications and premium rates, forbids the writing of insurance except in conformity with the classifications and rates so filed, and prohibits discrimination between insured in the same class and degree of hazard. Since the mere filing of these rates with the commission was of little practical value to employers, actual publicity was given them by the distribution of comparative tables and by correspondence in reply to inquiries. In order that the commission might be assured that the rates were being adhered to, it required a detailed report of every policy issued. These reports were checked with the rates on file, and 45 discrepancies were ordered corrected. As a result of this system, refunds ranging in individual amounts from a few dollars to \$4,000 were directed. It was found that there had been a great want of uniformity in the classification of like industries by the same insurance companies. To remedy this condition, and in conformity to law, the commission issued numerous rulings interpreting insurance classifications. One such ruling, for example, required that the employees in a lumber yard connected with a sawmill should take the lumber yard rate. It was found difficult to determine accurately, because of insufficient statistical experience, the relative hazards of different industries in order that rates might be proportioned justly. Rates discriminatory in themselves are forbidden by law, and the commission found it necessary to issue rulings remedying this condition in several instances. In general, the effect of these rulings was to reduce the rate on most classes of retail stores by 33½ per cent and the rate on agricultural machinery manufacturing from \$2.96 to \$1.79.

The table following gives figures with regard to compensation incurred and premium rates.

WISCONSIN COMPENSATION INSURANCE EXPERIENCE ON AUDITED POLICIES BY INDUSTRY CLASSES, 1914.

Industry class.	Audited pay roll.	Earned premium.	Compensation incurred.	Number of accidents.	Premium rate collected.	Pure premium.	Bureau base rate.
Mining and quarrying.....	\$757,100	\$34,817	\$15,734	255	\$4.59	\$2.04	\$6.26
Chemical manufacturing.....	767,900	10,106	4,881	143	1.32	.64	1.59
Earth and stone working.....	1,834,400	27,104	13,291	582	1.48	.73	2.01
Food, beverages, and tobacco manufacturing.....	9,452,200	127,383	62,486	1,808	1.35	.66	1.70
Leather working.....	5,212,100	48,729	19,450	885	.94	.37	.70
Metal working.....	15,904,800	230,934	122,112	6,699	1.46	.77	1.72
Paper manufacturing.....	5,879,200	103,034	58,322	2,389	1.75	.99	1.93
Textile manufacturing.....	4,557,100	27,419	8,854	420	.60	.19	.....
Vehicle manufacturing.....	1,886,500	21,289	6,480	854	1.13	.34	.96
Woodworking.....	16,935,500	390,401	230,190	5,925	2.30	1.36	3.70
Miscellaneous manufacturing.....	4,768,200	55,076	16,679	889	.....	.....	.....
Construction.....	12,323,700	391,578	193,416	2,792	3.17	1.57	3.54
Public utilities.....	744,000	29,543	15,620	177	3.97	2.10	4.89
Transportation.....	5,302,700	121,354	78,737	1,316	2.29	1.48	2.65
Trade.....	12,852,200	112,101	50,453	1,381	.87	.39	.73
Miscellaneous industries:							
Clerical office work.....	9,312,465	24,442	932	80	.26	.01	.09
Collectors and salesmen.....	803,900	4,703	6,583	36	.59	.82	.17
Farming.....	647,800	8,539	4,466	92	1.32	.69	1.57
Gardening.....	232,500	3,264	718	16	1.40	.31	.92
Hotels and restaurants.....	1,151,200	12,158	4,155	121	1.06	.36	.67
Ice harvesting.....	130,700	4,150	1,535	98	3.18	1.18	4.90
Janitor work.....	1,877,900	19,802	7,526	118	1.05	.40	1.40
All industries.....	113,498,500	1,730,510	1,926,323	126,520	1.53	.82	1.90

¹ These totals are correct for all industries, but are not the totals of the items because some minor industry classes are included which are not shown separately.

This table shows the completed experience by industry classes on policies which were issued in 1913, and on which, consequently, a full year had elapsed December 31, 1914. Employers carrying their own risks were not included. The pay rolls and earned premiums were determined by actual audits. The compensation incurred was determined as of February 1, 1915. Only 15 per cent of the compensation incurred was reported as outstanding on that date. Hence the cost of compensation ought not to be materially affected by subsequent developments. The table was made up from individual policy reports and both the compensation cost and the classifications were checked with other records of the commission.

In column 3 the total compensation incurred includes both the indemnity and medical benefits paid or to be paid on account of accidents which occurred while these policies were in effect. The total accidents reported include all those reported to the insurance companies by the insured. About two-thirds of these accidents caused more than one day's loss of time (tabulatable accidents) and about one-third caused disability for more than 1 week (compensable accidents). These figures are not of much value for comparison of accident rates because some employers are much more careful than others to report all accidents and some insurance companies are careless in filling out the number of accidents on each policy.

The interesting and important feature of this table is the difference between the average pure premium—that is, the actual cost of

compensation per \$100 of pay roll—and the average bureau base rate, the former being 82 cents and the latter \$1.90. The commission thinks it is fair to assume some underestimate of outstanding liabilities on the part of insurance companies, which would increase the pure premium to perhaps 85 cents; also that merit rating would probably reduce the actual bureau rates to an average of about \$1.70. This would leave a margin of 85 cents, or 50 per cent of net premiums, for management expenses, underwriting profit, and catastrophe reserves. Expenses and profits should not exceed 50 per cent of compensation, or 33½ per cent of net premiums. Thus, even assuming an average pure premium of 90 cents, an average base rate of \$1.50 should be ample, in the opinion of the commission, to cover all legitimate costs after making full allowance for merit rating reductions.

The premiums collected (column 5) average substantially less than the bureau base rates (column 7), not only on account of merit rating reduction, but also because more than 40 per cent of the total volume of insurance was carried by mutual and nonbureau stock companies.

In the following table are presented the accidents reported by insurance companies during 1914, classified by nature and extent of injuries. With all injuries represented by 100, the per cent of tabulatable injuries (those causing more than one day's loss of time) and of compensable injuries is given; with the tabulatable injuries represented by 100, the per cent of compensable injuries and of all injuries is given, and with compensable injuries represented by 100, the per cent of all injuries and of tabulatable injuries is given:

COMPENSATION INSURANCE ACCIDENT CLAIMS REPORTED UNDER THE WISCONSIN WORKMEN'S COMPENSATION ACT, 1914, BY NATURE AND EXTENT OF INJURY.

Line number.	Nature of injury.	Number of claims.	Per cent of permanent partial.	Per cent of all claim notices.	Per cent of tabulatable injuries.	Per cent of compensable injuries.
1	All injuries.....	30,651	.....	100.0	153.0	315.0
2	Tabulatable injuries ¹	20,191	.....	66.0	100.0	208.0
3	Compensable injuries ²	9,720	.....	31.7	48.2	100.0
4	Fatal.....	121	.....	.4	.6	1.2
5	Permanent.....	528	.....	1.7	2.6	5.4
6	Temporary ³	19,525	.....	64.0	97.0	201.0
7	Undetermined.....	17	.....	.05	.08	.17
8	Fatal, with dependents.....	82	.....	.27	.4	.84
9	Fatal, without dependents.....	39	.....	.13	.19	.4
10	Permanent total.....	2	.....	.....	.01	.02
	Permanent partial.....	526	100.0	.....	.....	.....
11	Enucleation of one eye.....	10	1.9	.....	.....	.....
12	Blindness of one eye.....	30	5.7	.....	.....	.....
13	Deafness of one ear.....	2	.4	.....	.....	.....
14	Facial disfigurement.....	1	.2	.....	.....	.....
	Loss of:					
15	Arm at shoulder.....	4	.8	.....	.....	.....
16	Arm at elbow.....	5	1.0	.....	.....	.....
17	Hand.....	7	1.3	.....	.....	.....
18	Palm.....	1	.2	.....	.....	.....
19	Thumb and metacarpal.....	5	1.0	.....	.....	.....
20	Thumb at proximal.....	12	2.3	.....	.....	.....

¹ Tabulatable injuries are those which cause disability extending beyond the day, shift, or turn on which the accident occurs.

² Compensable injuries, under the law, are those in which disability extends over more than 7 days.

³ This is a total of lines 49 to 51.

COMPENSATION INSURANCE ACCIDENT CLAIMS REPORTED UNDER THE WISCONSIN WORKMEN'S COMPENSATION ACT, 1914, BY NATURE AND EXTENT OF INJURY—Con.

Line number.	Nature of injury.	Number of claims.	Per cent of permanent partial.	Per cent of all claim notices.	Per cent of tabulatable injuries.	Per cent of compensable injuries.
	Loss of—Concluded.....					
21	Thumb at second.....	32	6.1			
22	Index and metacarpal.....	2	.4			
23	Index at proximal.....	27	5.1			
24	Index at second.....	34	6.5			
25	Index at distal.....	63	12.1			
26	Middle finger and metacarpal.....	3	.6			
27	Middle finger at proximal.....	8	1.5			
28	Middle finger at second.....	32	6.1			
29	Middle finger at distal.....	44	8.3			
30	Ring finger and metacarpal.....	8	1.5			
31	Ring finger at proximal.....	13	2.5			
32	Ring finger at second.....	27	5.1			
33	Ring finger at distal.....	25	4.7			
34	Little finger and metacarpal.....	6	1.1			
35	Little finger at proximal.....	8	1.5			
36	Little finger at second.....	11	2.1			
37	Little finger at distal.....	15	2.8			
38	All fingers of one hand.....	4	.8			
39	Leg at knee.....	6	1.1			
40	Foot.....	4	.8			
41	Great toe and metatarsal.....	2	.4			
42	Great toe at proximal.....	1	.2			
43	Great toe at second.....	2	.4			
44	Lesser toe and metatarsal.....	3	.6			
45	Lesser toe at proximal.....	5	1.0			
46	Lesser toe at second.....	2	.4			
47	All toes of one foot.....	1	.2			
48	Permanent partial, not otherwise classified ¹	61	11.5			
49	Temporary total, over 1 week.....	9,039		29.5	44.8	92.9
50	Temporary partial, over 1 week.....	15		.05	.07	.15
51	Temporary total, not over 1 week ²	10,471		34.1	51.7	107.7
52	Nontabulatable.....	10,460		34.0	52.0	107.0

¹ These are injuries causing permanent partial disability other than injuries specifically enumerated in the Wisconsin Workmen's Compensation Act.
² These are tabulatable but are noncompensable. They require medical aid only.

The following is a condensed statement of the business of insurance companies in Wisconsin under the workmen's compensation law. These totals do not necessarily agree with those in the table on page 57, for the reason that this table is made up from reports filed with the commission, while the other table includes only audited policies.

STATEMENT OF INSURANCE COMPANIES UNDER WISCONSIN WORKMEN'S COMPENSATION ACT, 1914.

Insurance companies.	Net pre- miums.	Earned premi- ums.	Compensation and expenses incurred.								Per cent of earn- ed pre- mi- um.
			Compensation.				Expenses.			Total.	
			Indem- nity. ¹	Med- ical bene- fits. ¹	Total. ¹	Per cent of earn- ed pre- mi- ums.	Amount.	Per cent of earn- ed pre- mi- ums.	Per \$1 of com- pen- sa- tion.		
Wisconsin mutuals	\$382,755	\$348,854	\$134,900	\$73,616	\$208,516	60	\$62,096	18	0.30	\$270,612	78
Interinsurers and foreign mutuals...	75,056	60,444	21,169	10,069	31,238	52	24,052	40	.77	55,290	92
Stock companies...	1,349,457	1,424,278	472,506	215,172	687,678	48	540,674	38	.79	1,228,352	86
Total.....	1,807,268	1,833,576	628,575	298,857	927,432	51	626,822	34	.67	1,554,254	85

¹ Includes both the amount paid and that outstanding.

The fourth annual report of the operation of the Wisconsin Workmen's Compensation Act, issued by the industrial commission of that State and covering the period from July 1, 1914, to June 30, 1915, shows that the number of workers voluntarily placing themselves under the act during the year was approximately 13,000. It also states that the number of employers under the protection of the act exceeded 250,000.

Of the industrial accidents occurring during the year in establishments employing 4 or more persons, 99.5 per cent were subject to compensation. During the year 11,191 accidents were reported, and 11,377 cases settled—10,534 directly between the parties, 804 after hearing by the commission, and 39 cases were carried to the courts. The aggregate paid out as benefits and medical treatment was \$1,254,654, of which \$945,045 was for indemnity and \$309,609 was for medical aid. The cost of administration for the year was \$13,771, or \$1.21 per case settled, being a little over 1 per cent on the amount of benefits paid. In 1914 the total cost, including insurance premiums, to employers was \$2,150,000, approximately 63 per cent of which was paid as compensation and medical care. Thus it cost employers \$795,346 to pay \$1,354,654 in indemnities and medical benefits, or an expense of 58.7 cents for every dollar of compensation.

The report cites a few typical cases showing the awards made by the commissioners during the year.

The table following is a summary of the operations of the compensation act for the year:

OPERATIONS OF THE WISCONSIN WORKMEN'S COMPENSATION LAW FOR THE FISCAL YEAR ENDING JUNE 30, 1915.

Compensated accidents.

Result of injuries.	Accidents reported.	Cases settled. ¹	Cases pending.	Compensation paid.		Medical aid furnished.			Total compensation paid.	
				Amount.	Average per case.	Amount.	Average per case.	Per cent of all benefits.	Amount.	Average per case.
Death.....	165	200	49	\$296,084	\$1,485	\$11,220	\$56	4	\$307,304	\$1,537
Major permanent disability.....	81	139	16	167,933	1,210	27,560	198	14	195,493	1,408
Minor permanent disability.....	378	432	68	83,309	193	15,481	36	16	98,850	228
Temporary disability over 7 days.....	10,382	10,606	1,573	397,650	37	255,348	24	39	653,007	61
Total.....	11,006	11,377	1,706	945,045	83	309,609	27	31	1,254,654	110

Compensation in case of death, permanent disability, and disfigurement.

Deaths with dependents..	88	127	31	\$296,084	\$2,161	\$4,836	\$35	2	\$300,920	\$2,196
Deaths without dependents.....	77	63	18	.....	.....	6,384	101	100	6,384	101
Permanent total disability.....	2	5	1	16,452	3,290	2,250	450	12	18,702	3,740
Facial disfigurement.....	3	5	1	1,263	253	687	137	35	1,950	390

¹ Including cases pending July 1, 1914.

OPERATIONS OF THE WISCONSIN WORKMEN'S COMPENSATION LAW FOR THE FISCAL YEAR ENDING JUNE 30, 1915—Concluded.

No compensation, but medical aid.

Temporary disability under 8 days.....	13,435				\$74,000	\$6	100	\$74,000	\$6
No disability.....	16,348				26,000	2	100	26,000	2
Total.....	29,823				100,000	3	100	100,000	3

Industrial Accidents, July 1, 1912, to December 31, 1914, is the title of the bulletin issued by the Wisconsin Industrial Commission under date of August 1, 1915. The report is a pamphlet of 52 pages, devoted almost entirely to accident statistics for the period named. Twenty-four thousand accidents classified as causing death, permanent injury, or disability for more than one week are analyzed. Previous publications of the commission have analyzed the accidents occurring in particular industries or due to particular causes, and the present report brings this experience together so that it may be studied as a whole. The material is presented in 23 tables, in which compensable accidents are classified by number, industry, severity, nature and location of injury, duration of disability, wage groups of workmen injured, ages of workmen injured, ability of those injured to speak and understand English, length of experience at place of employment, number of hours worked on day of injury, cause of accident and nature of injury, and cause of accidents grouped by industries.

The mere number of accidents, even when compared with the extent of exposure, does not give a true index of the hazard. The number of compensable accidents per \$100,000 of pay roll was 6 in foods, beverages, and tobacco, and 10.7 in construction work. But the latter group, with nearly the same total pay roll, included 27 fatal and 18 serious permanent injuries, as compared with 7 fatalities and 5 permanent disabilities in the former.

It was thought desirable, therefore, to obtain a single expression which should combine the number and severity of injuries. For this purpose a day's time loss was selected. A death or permanent total disability evidently entails a time loss equivalent to the workman's expectancy of working life at the time of his injury. At the age of 30 years the expectancy of working life was taken as 25 years, or 7,500 working days. Therefore, since the average age of workmen injured in Wisconsin is stated in the report to be not far from 30 years, each death or permanent total disability represents 7,500 days of lost time. A permanent partial disability represents a fraction of 7,500 days proportionate to the degree of disability. In this way the commission obtained an expression for the total importance (or gravity)

of accidents occurring in a particular industry or due to a particular cause.

The report includes two appendixes. Appendix I is a table of weights of fatal and serious injuries (12 in number), for expressing an injury in terms of working days lost to the community.

Appendix II gives a classification of the causes of accidents. This classification has grown out of the commission's safety work, and it naturally emphasized those causes of accidents which are of frequent occurrence in Wisconsin. Railway accidents are not considered, because interstate railways are not within the jurisdiction of the commission. Likewise, farm accidents and those in establishments employing less than 4 people are not included.

The following is a statement of all compensable injuries reported to the industrial commission for the year 1914, showing severity of injury, time lost (computed as explained on the preceding page), and pay roll exposed, under each specified industry group:

COMPENSABLE ACCIDENTS REPORTED FOR THE YEAR 1914 UNDER THE WISCONSIN WORKMEN'S COMPENSATION ACT.

Industry.	Pay roll exposed.	Severity of injury.					Time lost (days).	
		Fatal.	Major permanent.	Minor permanent.	Temporary.	Total.	Temporary injuries.	All injuries.
Mining and quarrying.....	\$2,800,000	16	2	10	375	403	10,000	136,000
Earth and stone working.....	1,500,000	2	1	2	86	91	3,000	20,000
Food, beverages, and tobacco manufacturing.....	11,500,000	7	5	15	667	694	18,000	83,000
Leather working.....	7,700,000	2	.....	17	258	277	6,000	25,000
Metal working.....	30,700,000	15	¹ 19	102	1,850	1,986	43,000	212,000
Paper working.....	7,100,000	8	4	29	894	935	21,000	95,000
Textile working.....	5,700,000	1	1	2	108	112	3,000	14,000
Vehicle manufacturing.....	5,700,000	.....	5	19	282	306	7,000	23,000
Woodworking.....	23,200,000	47	¹ 22	135	2,723	2,926	81,000	513,000
Other manufacturing.....	5,800,000	.....	3	11	257	271	6,000	27,000
Construction.....	11,900,000	27	18	21	1,207	1,273	36,000	281,000
Public utilities and transportation..	15,700,000	32	¹ 8	21	1,203	1,263	36,000	308,000
Miscellaneous industries.....	34,800,000	9	2	12	594	617	17,000	91,000
Total.....	164,100,000	166	¹ 91	396	10,504	¹ 11,157	² 284,800	² 1,800,000

¹ Including 1 permanent total disability.

² These totals are not the correct sum of the items, but they are as given in the bulletin of the commission.

OFFICIAL REPORTS RELATING TO LABOR.

UNITED STATES.

California.—*Commission of Immigration and Housing. An A B C of housing. [Sacramento], 1915. 15 pp.*

This pamphlet is intended to serve as a primer on housing. It is in no way a technical treatise on this complex subject, nor is it proposed as an outline for a housing ordinance. The commission publishes this material in the hope that it will enable an industrious few to survey and study the general housing evils and problems peculiar to any one community. The commission invites correspondence concerning the subject matter of this pamphlet and, on request, offers to send without cost to a community a detailed plan of directions for making a complete housing survey of a city or town, and will supply a housing expert to conduct such survey.

The subject is presented under three heads: (1) The survey; (2) The city plan; (3) Housing regulations (construction and sanitation).

Illinois.—*Bureau of Labor Statistics. Laws governing free employment offices and private employment agencies in Illinois. As amended and in force on and from July 1, 1915. Springfield. 15 pp.*

Contains the texts of the two laws in force governing free employment offices and private employment agencies in the State.

——— *Industrial Board. Bulletin No. 1. [Springfield, Ill., 1915.] 222 pp.*

As stated on the title page this issue of the bulletin is devoted exclusively to opinions in cases arising under the workman's compensation act, decided by the industrial board of Illinois, from the date of its organization July 1, 1913, to July 1, 1915. A review of these decisions will appear in a future number of the REVIEW.

Iowa.—*Industrial Commissioner. First biennial report, period ending June 30, 1914. Des Moines, 1915. 50 pp.*

A discussion of the various schemes of insurance against industrial accidents, and a reproduction of the report of the labor bureau in 1914 on "Iowa Industrial Accidents." A summary of the report will appear in a future number of the REVIEW.

Massachusetts.—*Bureau of Statistics. Labor Bibliography, 1914. September 1, 1915. Boston, 1915. 105 pp. (Labor Bulletin No. 111; being Part VIII of the annual report on the statistics of labor for 1915.)*

According to the prefatory note this volume constitutes the fourth annual publication of this character by the Massachusetts bureau. It includes among its entries both books and articles in periodicals, having reference to the subject of labor in its broad aspect, which appeared during the calendar year 1914. It includes also the more important titles which have appeared in English, French, and German and, so far as obtainable, those in other languages.

The bibliography is classified under 29 principal headings.

Previous bibliographies, in addition to the annual volumes, similar to the one under review, published by the Massachusetts bureau of labor statistics include old-age pensions, magazine articles on labor topics, 1906 and 1907, homesteads for workmen, and home work.

— *Bureau of Statistics. Seventh annual report of labor organizations for the year 1914. Boston, 1915. 63 pages (Labor bulletin No. 112; being Part IX of the annual report of the statistics of labor for 1915.)*

The present report is the seventh of the series of annual reports on the subject of labor organizations issued by the bureau, beginning with the report in 1908. The statistics contained in the report cover the calendar year 1914 and have reference to the number and membership of labor organizations in the State at the close of the year and the unemployment of organized workmen, data for previous years being presented for comparative purposes.

The data presented were secured in answer to inquiries contained in schedules which were received from union officials believed to be well qualified to furnish the requisite information.

The following summary is abstracted from the report, pages 7, 8:

Number and membership of local trade-unions.— At the close of 1914 the total number of local organizations in the Commonwealth was 1,392, showing a decrease of 11 organizations during the year, 80 new local unions having been organized during the year, while 91 disbanded or were amalgamated with some other union. The aggregate trade-union membership at the close of 1914 was 234,266, showing a decrease of 7,460, or 3.1 per cent, as compared with the aggregate (241,726) at the close of 1913. The aggregate for 1914 included 205,347 males and 28,919 females, as compared with 211,213 males and 30,513 females at the close of 1913, showing for males a decrease of 2.8 per cent and for females a decrease of 5.2 per cent.

Unemployment.—The percentages of unemployed for all causes of the aggregate number of trade-union members for whom reports were received, for the close of the quarters ending on the dates March 31, June 30, September 30, and December 31, were, respectively, 12.9, 9.9, 11, and 18.3. The corresponding percentages unemployed for lack of work were, respectively, 9.2, 6.9, 8.5, and 14.9. The unemployment appeared to be greater at the close of each quarter in 1914 than at the close of the corresponding quarter in 1913, the percentages unemployed for all causes in 1913 having been, for the respective quarters, 11.3, 6.4, 6.8, and 10.4, and for lack of work 7.3, 4.3, 4.3, and 7.3 for the respective quarters.

Wages and hours of labor.—Notwithstanding the large amount of unemployment observed in nearly all of the more important organized trades in Massachusetts in 1914, the union scale of wages and hours of labor in Massachusetts in 1913 appeared to be quite generally maintained during the year 1914, and not infrequently in certain occupations which were not, to any great extent, affected adversely by the industrial depression, increases in the rate of wages and decreases in the hours of labor were secured through the efforts of organized labor.

— *Commission of Economy and Efficiency. Functions, organization, and administration of the departments in the executive branch of the State government. Boston, 1914. 513 pages.*

The purpose in this report is to make available information about each department of State service. Most of the information contained therein, it is stated, is not found in any other public document, many facts being of a character not contained in the departmental reports. The information contained in it was first sought for by means of a set of questions sent out in August, 1913.

The first chapters of the report describe some noteworthy features of the functions and organization of the departments with which the report is concerned. They also contain a chart of the executive branch of the State government as a whole, and a map showing the location of State institutions, reservations, and other State property. The latter and larger part of the report is devoted to detailed descriptions of the work and organization of State departments. Among the departments covered by the report are to be noted the State board of labor and industries, the industrial accident board, the general board for prevention of industrial accidents and diseases, the

State board of conciliation and arbitration, the minimum wage commission, and the homestead commission.

The volume is supplied with a somewhat detailed index.

Montana.—*Industrial Accident Board. Report for the three months ending September 30, 1915, Workmen's Compensation Act, in effect July 1, 1915. [Helena, 1915.] 224 pp.*

This constitutes the report under the Workmen's Compensation Act for the first three months of its operation, July 1 to September 30, 1915. A summary of this will appear in a future number of the REVIEW.

New York—NEW YORK CITY.—*Joint Board of Sanitary Control in the Cloak, Suit, and Skirt and the Dress and Waist Industries. Five years' work and progress of the Joint Board of Sanitary Control of the Cloak, Suit, and Skirt and the Dress and Waist Industries; an experiment in industrial self-control. October 31, 1910–October 31, 1915. New York City. 15 pp. (Bulletin No. 7.)*

The Joint Board of Sanitary Control, not, of course, an official body, was established on October 31, 1910, as a result of a strike in the cloak, suit, and skirt industry in the summer of that year, and exists by reason of an agreement which was then entered into. This brief pamphlet constitutes a brief outline of its work in the first five years of its existence, indicating the organization of the board, sanitary inspections made under its authority, complaints investigated, as well as its work in fire protection, for education, and in medical aid. An account of the organization of the board and an analysis of its constitution and work may be found in Bulletin 98 of this Bureau, pp. 203–272.

Ohio.—*Industrial Commission. Work of the free labor exchanges of Ohio for the year ending June 30, 1915. Columbus, 1915. 88 pp. (Department of investigation and statistics. Report No. 15.)*

Free public employment exchanges were established by law in Ohio in 1890 because of the abuses and frauds perpetrated by private employment agencies. So limited appears to have been their success, however, that proposals were made by the commissioner of labor for their abolishment in 1908, but beginning about the year 1909 or 1910 a very remarkable increase took place in the number of persons applying for work and of employers applying for help. On September 1, 1913, the supervision of the 5 public employment offices in the State passed into the hands of the industrial commission; but not until March, 1914, was the work of organizing them seriously undertaken. A system of record cards has since then been adopted similar to those in use by the Massachusetts public employment offices.

The commissioner in charge of employment agencies declares that—

At the present time the Ohio public employment offices are doubtless performing their work in a more efficient manner than are those of any other State. With the large appropriations made for the work and the experience which has been gained by the officials in charge of this work, the coming year should show even greater results than those attained during the past year and recorded in the statistical tables of this report. If the mistakes of the past are avoided, and the administration of these offices is left free from political control, and officials who have shown their efficiency in management are undisturbed, there can be little doubt that Ohio will serve as an example to other Commonwealths in the way of efficient management of a system of public employment offices, as she led the way in 1890 in the establishment of such offices.

The following summary table shows the results of the operation of the exchanges for the period 1909 to 1915. The column "Positions secured" shows the number of persons referred to positions, as in many cases reports from employers were not received. Of the 73,523 persons referred to positions in 1914–15, it is definitely known that 62,237 places were filled.

Prior to April 1, 1915, there were 5 exchanges; since that date 7 exchanges have been in operation.

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OPERATIONS OF THE OHIO PUBLIC EMPLOYMENT OFFICES, 1909-1915.

	Situ- tions wanted	Help wanted	Posi- tions se- cured.	Situ- tions wanted	Help wanted	Posi- tions se- cured.	Situ- tions wanted	Help wanted	Posi- tions se- cured.	Per cent positions se- cured are of total appli- cations for—	
										Situ- tions.	Help.
1909.....	18,214	15,404	14,372	12,644	14,980	11,313	30,838	30,894	25,685	83.2	84.5
1910.....	30,614	31,003	29,963	18,821	21,534	18,784	52,597	52,597	46,727	98.6	92.6
1911.....	27,846	25,776	25,474	22,306	23,907	22,102	49,683	49,683	47,576	94.9	95.8
1912.....	34,641	34,116	33,950	19,798	21,403	19,609	55,518	55,518	53,559	96.6	96.5
1913.....	43,037	42,763	42,620	24,943	24,864	24,864	69,155	69,155	67,484	99.3	97.6
1914 (Jan. 1-June 30).....	14,238	9,486	9,304	11,619	13,223	10,762	22,709	22,709	20,066	77.6	88.4
1915.....	266,364	44,143	46,329	70,484	31,097	28,194	336,848	75,840	73,533	21.8	96.9

Of the 39,390 male persons reported actually placed during the year 1915, 22,640 were laborers, 6,279 dayworkers, 2,352 in skilled occupations in the building trades, 1,314 in farm, dairy, and garden work, and 1,133 in skilled metal trades. Of the 22,847 female persons reported actually placed 15,240 were dayworkers, including laundresses; 2,806 in general housework; 1,463 in hotel and restaurant work, and 1,381 factory workers. In no other occupation did the number of either sex placed in positions exceed 900.

Pennsylvania.—*Bureau of Industrial Statistics. Forty-first report of the Bureau of Industrial Statistics. Harrisburg, 1915. 125 pp. (Annual report of the secretary of internal affairs, 1915, Part III).*

The creation of a department of industry and labor in Pennsylvania in 1914, which among other functions assumes also those of the bureau of industrial statistics in the department of internal affairs, terminates the activities of this bureau. For this reason the present and final report of the bureau of industrial statistics varies considerably in its contents. To avoid duplication much statistical matter has been omitted. Whatever general statistics are presented in the report pertain to select subjects or matters especially investigated for the benefit of those who have asked for information of that nature; and as a part of that work the bureau has compiled some occupation statistics pertaining to Pennsylvania as found in the Federal Census of 1910. The rest of the volume is given over to articles on welfare work and cooperation as a means to create more cordial industrial relations, illustrated by discussion of several welfare work plans, model villages and homes as a means of uplift, etc.

— **PHILADELPHIA.**—*Emergency Aid Committee. Special report of the Bureau of Employment of the Home Relief Division of the Emergency Aid Committee. Philadelphia [1915]. 21 pp.*

The Bureau of Employment of the Home Relief Division of the Emergency Aid Committee of Philadelphia was opened on January 7, 1915, for giving temporary work to men out of employment or securing for them permanent positions. It cooperates with many other agencies, such as the Philadelphia branch of the Federal Division of the Department of Labor and the Juvenile Workers Bureau of the city.

From January 7, to September 2, 1915, permanent positions were found for 2,396 applicants for work; 2,046 men found temporary work. In the women's department 1,216 applications were received and 861 were placed in permanent work.

West Virginia.—*State Road Bureau (Department of Agriculture). Rules for prison camps, surveys and records, and a list of standard forms. Charleston, 1915. 37 pp. (Joint Bulletin No. 17, 1915.)*

This bulletin gives the legislation of West Virginia as to employment of convicts on public roads and the rules adopted by the State road bureau for the government of prison camps.

——— *Workmen's Compensation Fund. [Report, July 1, 1913 to June 30, 1914. Charleston, 1915.] 210, iii, pp. (Public Service Commission. First annual report, Pt. 3.)*

This part of the first annual report of the Public Service Commission of West Virginia covers the work of the commission as the administrative board of the workmen's compensation fund. A summary of the report will appear in a future number of the REVIEW.

United States.—*Bureau of Foreign and Domestic Commerce (Department of Commerce). Commercial organizations in Switzerland and the Swiss Department of Commerce. Washington, 1915. 28 pp. (Special agents series No. 101.)*

This report constitutes one of a series of similar monographs relating to commercial organizations in France, Germany, and the United Kingdom. It relates to commercial organizations in Switzerland and includes a discussion of the character and functions of chambers of commerce and a somewhat detailed account of the development and present activities of the federal department of Switzerland having charge of commercial matters.

Three chambers of commerce have been organized for Switzerland having the objects and purposes usual for such organizations. They have, however, gradually assumed the character of employers' organizations, and their activities in that regard, it is stated by the report, have been generally limited to efforts at mediation between employers and employees. The chambers with official backing may act as courts of arbitration at the request of parties, but they have no initiative of their own in that respect.

The Swiss industrial association (*Schweizerischer Gewerbe-Verein*) is an association for the furtherance of the interests of crafts and trades and aims to be of assistance to artisans and tradesmen. It was founded in 1879 and received a subsidy of 20,000 francs (\$3,860) from the Federal Government. It is frequently called upon by the Government to give expert opinion on subjects relating to the interests of artisans and tradesmen. It maintains a course of lectures on subjects of interest to its members.

——— *Bureau of Foreign and Domestic Commerce. (Department of Commerce.) The Women's muslin-underwear industry. Report on the cost of production of women's muslin underwear in the United States. Washington, 1915. 184 pages. (Miscellaneous series, No. 29.)*

This is the first of a series of reports to be issued by the Bureau of Foreign and Domestic Commerce concerning the cost of production in different branches of the clothing industry. The investigation was undertaken in accordance with the act of August 23, 1912. The report contains information concerning the cost of production, imports and exports, working conditions, factory equipments, selling methods, and other trade conditions of interest in connection with the women's muslin-underwear industry, together with some practical suggestions with regard to efficient factory management, based on interviews with manufacturers and on the personal observations of the special agents of the bureau.

It is stated that the industry under review has practically no foreign competition in the United States. The estimated value of the product in the United States is from \$30,000,000 to \$40,000,000 per year, and the value of the importations is about \$300,000 a year.

In the investigations reports were received from 65 establishments located in nine States, said to be fairly representative of the industry. Their aggregate sales, during their last business period, usually one year, amounted to \$14,619,518.

Concerning employees and wages in the industry, the following summary is abstracted from page 32 of the report:

In most establishments the busy season includes the months of February, March, April, May, September, October, and November; the dull season January, June, July, August, and December. The total number of employees in the 65 establishments reporting was 8,989 during the busy season and 7,769 during the dull season.

Of establishments having about the same amount of net sales, those in New York City have much fewer employees than the establishments elsewhere. The great difference indicates that the products of the factories in New York City are made of finer materials and sell for higher prices than the products of factories elsewhere.

Of workers 16 years and over, the females largely outnumbered the males in both the busy and dull seasons, but in greater proportion during the busy season. The average of all establishments during the busy season was 13 for males and 123.7 for females; in the dull season, 12.1 for males and 105.8 for females. Most of the males are time-workers and most of the females are pieceworkers.

The number of employees that were under 16 years was 106 in the busy season and 103 in the dull season. All of these children were employed in establishments outside of New York City. Of the total 106 children in the busy season, 72 were time-workers and 34 pieceworkers; all were females except 3.

In the muslin-underwear industry there are many employees who work only during the busy season. Statistics collected by agents of the Bureau of Labor Statistics, Department of Labor, show that in two of the largest establishments which manufacture muslin underwear in New York City, the average time worked by the 1,150 employees on direct labor operations was 27.41 weeks in the year, from April, 1913, to March, 1914, inclusive.

The data secured from these establishments showed that in 1913-14 the weekly earnings of such employees averaged \$8.77 in one establishment, \$9.66 in the other, and \$9.18 in both. These averages, however, were not on the full-time basis of 50 hours a week, but on the basis of the time actually worked. In one establishment where more complete data could be secured the actual earnings averaged \$8.77, but if the earnings had been computed on the full-time basis they would have averaged \$10.09 a week.

Chapter 6 (pp. 143-151) of the report presents some details as to working conditions in the industry, the number and distribution of employees, character of work, wages, safety appliances, and welfare work.

— *Bureau of Mines (Department of the Interior). Report of the Selby Smelter Commission. Washington, 1915. 528 pp. illus., maps, plates, diagrams.*

The Selby smelter commission was a body organized for the determination of questions of fact and other matters concerned with certain injunction proceedings at issue between the people of the State of California and the Selby Smelting & Lead Co. It was authorized by the superior court of Solano County, Cal., which was called upon to deal with an injunction case growing out of complaints by the residents of the city of Benicia, Cal., asking for an injunction to restrain the Selby Smelting & Lead Co. from permitting the smoke from its smelter to blow over the city or its tributary territory.

This report presents the findings of the commission, based upon the evidence and upon a series of scientific experiments made for the purpose of determining the facts in the case. The papers included in the report contain a detailed discussion of the effect of smelter smoke on organic life. "As here assembled the report of the Selby commission is published by the Bureau of Mines (whose director was head of the commission) as a contribution to the literature of metallurgical smoke in its relation to plant growth and to public health and comfort, and is an example of what is believed to be a satisfactory method of dealing with local controversies from the damage inflicted by mining and metallurgical establishments" (p. xviii).

Pages 503-520 consist of a bibliography on the effect of sulphur dioxide on vegetation and animal life.

———. *Children's Bureau (Department of Labor), Child-welfare exhibits: Types and Children. Washington, 1915. 58 pp., 8 plates, diagram. (Miscellaneous series number 4, Bureau Publication No. 14.)*

This bulletin on welfare exhibits has been prepared in answer to inquiries from organizations and individuals desiring to hold child-welfare exhibits of various kinds. The exhibit as a means of widespread publication of facts, it is stated, has proved important in recent years, particularly so in relation to child and infant welfare. The bulletin discusses matters relating to the scope of an exhibit which it may be desired to undertake, the use of traveling exhibits, the small infant welfare exhibit, the organization of children's health conference exhibits, exhibits on children's interests such as may be held in connection with the playground, settlement, school, or Sunday-school organizations; also community child-welfare exhibits, which are much larger in their scope and include community problems and health recreation and other aspects of child welfare.

The comprehensive exhibit may serve to secure community aims and purposes through tables and report publications and should combine both the appeal to the parent and to the citizen, using each to reinforce the other. "In this respect it offers a peculiarly democratic approach to the problems involved in the welfare of the child since it takes as point of departure not the 'poor child' nor the 'bad boy,' but all children, leading the parent to that interest in community action through which alone his own child may be safeguarded, and the citizen to a knowledge of the individual problems of heredity, ignorance, and poverty, on the adequate solution of which depends the community's future."

The report contains as an appendix a list of child-welfare exhibits owned by State departments, January, 1915; a copy of the record blank used by the children's health conference conducted by the Children's Bureau in the Panama Pacific Exposition; a table of weights and measures used as a standard of comparison for the children's health conference; the announcement and entry form of the Seattle Junior Exhibition and a brief account of the exhibit of the Children's Bureau at the Panama Pacific Exposition. There are also affixed copies of a series of 6 wall panels used in connection with the exhibits of the bureau at the Panama Exposition.

FOREIGN COUNTRIES.

Canada.—*Census and Statistics Office. The Canada Yearbook, 1914. Ottawa, 1915. XVI, 698 pp. Map and illustrations.*

This yearbook contains articles and statistics classified under the following headings: (1) Constitution and Government of Canada; (2) Physical characteristics of Canada; (3) Area and population; (4) Education; (5) Climate and meteorology; (6) Production; (7) Trade and commerce; (8) Transportation and communication; (9) Labor; (10) Finance; (11) Administration; (12) Principal events of the year 1914; and (13) Extracts from the Canada Gazette.

The statistics relative to labor show: (1) Time losses on account of labor disputes, by industries, in working days, 1901-1914; (2) Number of disputes, establishments, employees and time losses, 1901-1914; (3) Disputes, classified by industries, 1901-1914; (4) Relative wholesale prices (index numbers) of all commodities by groups, 1890-1914; (5) Relative wholesale prices (index numbers) by groups of commodities from month to month, 1914; and (6) Typical weekly expenditure for a family of 5 persons having an income of \$800 per annum.

Summaries of many of these topics have been presented in the MONTHLY REVIEW, as reports on them were received from time to time.

Denmark.—*Arbejderforsikrings-Raadet. Beretning fra Arbejderforsikrings-Raadets Industriafdeling for Aaret 1914.* Copenhagen, 1915. 63 pp.

— *Beretning fra Arbejderforsikrings-Raadets Søfartsafdeling for Aaret 1914.* Copenhagen, 1915. 47 pp.

— *Beretning fra Arbejderforsikrings-Raadets Fiskeriafdeling for Aaret 1915.* Copenhagen, 1915. 52 pp.

— *Beretning fra Arbejderforsikrings-Raadets Landbrugsafdeling for Aaret 1914.* Copenhagen, 1915. 241 pp.

The publications listed above constitute the reports for the calendar year 1914 of the State Insurance Council of Denmark concerning the operations of the various accident insurance laws of that country. In the order named these reports relate to: (1) Accident insurance of industrial workers; (2) seamen; (3) fishermen, and, (4) agricultural laborers. The law covering the first named group of workers was enacted in 1898; that covering seamen in 1905; fishermen and others in 1900; and agricultural laborers in 1906. All of these are compulsory insurance laws, with a voluntary feature connected with that covering agricultural labor. A somewhat full account of the provisions of these laws and their operation up through the years 1908 may be found in the twenty-fourth annual report of this bureau, 1909, volume 1, chapter 3. For an account of the effort now being made to consolidate and amend these enactments reference may be made to the December issue, page 83, of this REVIEW.

Two tables are here presented, summarizing the operations of these laws for the year 1914, with comparative data for the years 1913 and 1912

SUMMARY OF ACCIDENT INSURANCE STATISTICS FOR DENMARK, 1914.

Insured occupations.	Deaths.		Compensation to survivors.	Cases of temporary incapacity.	Cases of permanent incapacity.	Compensation for permanent incapacity.
	Number.	With survivors.				
Industrial workers.....	57	38	\$32,189.48	245	640	\$126,848.15
Fishermen, etc.....	33	30	11,765.20	19	36	5,325.70
Seamen.....	84	24	13,212.40	24	46	10,175.42
Agricultural laborers:						
Compulsory insurance.....	77	33	20,046.40	333	504	87,864.34
Voluntary insurance.....	8	6	4,020.00	55	83	12,629.23
Total.....	259	131	81,233.48	676	1,309	242,842.84

STATISTICS OF ACCIDENT INSURANCE IN DENMARK, 1912-1914.

	Industries.			Fishermen.		
	1912	1913	1914	1912	1913	1914
Cases reported to council.....	2,926	3,280	3,150	116	102	122
Cases decided:						
Number rejected.....	429	470	473	15	19	11
Not subject to compensation.....	1,779	1,940	1,964	51	36	51
Permanent disability—						
25 per cent.....	568	582	560	35	20	32
26 to 50 per cent.....	83	75	67	1	1	4
51 to 100 per cent.....	20	21	13	1	.....	.....
Deaths with survivors.....	30	40	38	29	16	30
Deaths without survivors.....	16	21	19	2	4	3
Cases reviewed.....	115	80	78	.....	1	3
Total.....	3,040	3,229	3,212	134	97	134
Compensation for disability.....	\$142,983	\$143,754	\$126,848	\$4,554	\$2,817	\$5,326
Compensation for death.....	23,048	33,121	32,189	14,964	9,728	11,765
Compensation for cases reviewed.....	8,988	6,098	7,566	.....	.....	.....

STATISTICS OF ACCIDENT INSURANCE IN DENMARK, 1912-1914—Concluded.

	Seamen.			Agricultural laborers.		
	1912	1913	1914	1912	1913	1914
Cases reported to council.....	517	578	545	2,614	2,671	2,753
Cases decided:						
Number rejected.....	34	43	45	314	316	354
Not subject to compensation.....	364	368	402	1,591	1,678	1,719
Permanent disability:						
25 per cent.....	49	47	39	545	516	513
26 to 50 per cent.....	6	5	4	86	63	56
51 to 100 per cent.....	1	1	3	23	28	18
Deaths with survivors.....	20	27	24	32	22	39
Deaths without survivors.....	64	57	60	34	38	46
Cases reviewed.....	9	9	3	39	86	78
Total.....	547	557	580	2,664	2,747	2,823
Compensation for disability.....	\$10,626	\$10,111	\$10,175	\$122,562	\$111,830	\$100,494
Compensation for death.....	12,810	14,311	13,212	19,350	13,186	24,066
Compensation for cases reviewed.....	1,013	394	225	3,618	7,038	5,663

Great Britain.—Board of Education. *Economy in food: Some suggestions for simple and nourishing meals for the home.* London, 1915. 31 pp. (Circular 917.)

A pamphlet suggestive of various ways in which, it is stated, with a little care and forethought, simple and nourishing meals can be prepared at a small cost with a view to saving money, consuming less meat, and being more careful about food in general. It is not intended to give instruction in the principles of cookery but rather to show by a few illustrations how meat can be used to the best advantage and also how a number of meals can be prepared which do not contain meat and which are nourishing and pleasant to the taste. This pamphlet forms one of the means of conducting a campaign in Great Britain looking toward a greater economy in the consumption of food.

——— **Board of Trade.** *Railway accidents. Summary of accidents and casualties during three months ending March 31, 1915.* London, 1915. 143 pp.

This volume presents a summary statement relative to accidents for the first three months of 1915, and reports of investigations made concerning various accidents.

——— **BRADFORD, ENGLAND.—Education Committee.** *Juvenile employment special subcommittee. Report for the year ended July 31, 1915.* Bradford, 1915. 17 pp.

By a system of cooperation between the teacher, the medical officer, and the employers, the mental and physical capabilities as well as the predispositions of the boys and girls who leave school early for taking up industrial work are studied and taken into consideration in connection with the opportunities offered for positions in industrial life. The juvenile employment office aims to place its boys and girls in suitable occupations and to encourage attendance at evening classes. Through a system of district committees it aims to keep in touch with all children leaving school up to the age of 17 years. The juvenile exchange is conducted in connection with the local labor exchange which is connected with the larger system of exchanges under the control of the National Board of Trade.

Three months before each child leaves school a card is sent to the education office giving a record of its health and school career and offering suggestions as to the kind of employment most suitable for that particular child. A member of the district committee then calls upon the parents of the child and frequently suggests a course of study at the night school or makes suggestions concerning the possibility of employment for the child. The work of the bureau is not limited to children leaving school but it frequently gives reconsideration to the cases of those who have become dissatisfied and unsuccessful in their positions.

It is stated that the medical reports concerning the child furnished to the bureau have been of great value in advising parents respecting suitable employment for their children. In some instances the physical defects were not mentioned by the parents but were brought out by expert medical examination.

The report declares that employers perhaps make more frequent use of the services of the bureau than do the children themselves.

During the year ended July 31, 1915, a total of 1,214 children (875 boys and 339 girls) registered at the bureau. Employers notified the bureau of 877 vacancies (648 for boys and 229 for girls) of which 568 were filled (412 with boys and 156 with girls). The members of the district committees made personal visits during the year in 8,437 instances. Their work in recommending attendance of evening classes has been highly successful, attendance in these classes showing an increase of 1,480 students over the previous session.

——— *Census office. Census of England and Wales. 1911. Summary tables: Area, families or separate occupiers and population; also population classified by ages, condition as to marriage, occupations, tenements, birthplaces, and infirmities. London, 1915. vi, 424 pp.*

Consists of summary tables of the results of the census of England and Wales in 1911. The report contains no text or brief summary table. That part of it relating to occupations and industries is contained in 20 tables which classify employees by sex, age, and conjugal condition according to industry groups and occupations; also by geographical districts of various kinds.

——— *COUNTY OF LONDON.—Area, families or separate occupiers and population, etc. London, 1914. 258 pp.*

In this report data compiled from the general census of 1911 are shown for the County of London and in each Metropolitan borough. In the administrative county in 1911 there were found 324,987 children aged 10 and under 14 years. Of this number 161,059 were males, of whom 2,878, or 18 per 1,000, were engaged in occupations, and 163,928 were females, of whom 246, or 2 per 1,000, were so engaged.

The total population of the County of London in 1911 was 4,521,685, comprising 1,033,861 families or separate occupiers, "private" or other, while the total number of private families was 1,023,951, consisting of 4,252,402 persons. The number of persons in 121,591 tenements with more than 2 occupants per room was 758,438, of whom 289,802 were under 1 year of age. The percentage of the population in private families living more than 2 occupants in one room was 17.8.

——— *Foreign office. Further correspondence respecting contract labor in Portuguese West Africa. In continuation of Africa, No. 1, 1914, cd. 7279. London, 1915. vi, 87 pp. (Africa No. 1, 1915.) Cd. 7960.*

A collection of correspondence between British consular officers and the British foreign office which sheds light on the present conditions surrounding colored contract labor in Portuguese West Africa. Up to the enactment of the law of May 27, 1911, colored contract laborers, so-called "serviçaes," recruited in the Portuguese possessions on the mainland of Africa for work in the islands of São Thomé and Príncipe were virtually in a state of slavery. They were contracted out to planters by their native chiefs as punishment for "crimes," transported in chains, and never returned to their native villages. Through the intervention of the British Government the Portuguese Government has enacted legislation which has brought about considerable improvement in the conditions of these contract laborers. While under the old system the colored natives had no knowledge of the conditions of their contract of hire, they are now recruited by authorized agents and brought before a curator appointed by the Government in whose presence they sign their labor contract by means of thumb prints. Before signing the contract the "serviçaes" are closely questioned by the

curator as to whether they fully understand all the conditions of the contract, and if this is not the case the curator explains these conditions to them at great length. After the signing of the contracts the natives are put under no restraint and move about freely until a steamer carries them to their destination. During the time of the contract the laborers receive only a part of their wages, while the balance is retained and handed over to them by the authorities of their native district to which they are repatriated by the Government on the expiration of their labor contract. According to a memorandum of the Portuguese minister of foreign affairs the repatriation of those "serviçaes" who have been for a long time in the islands of São Thomé and Príncipe is effected with great difficulty for the reason that many of these "serviçaes" are now old and incapable of earning their own subsistence, that the natives refuse to be lodged at the villages prepared for the repatriated, that they soon spend the money they bring with them, and having spent their money they are left destitute and give themselves up to vagabondage and robbery. There is, moreover, great lack in transportation facilities, the only steamship company so far available refusing to carry more "serviçaes" than can be accommodated as deck passengers.

— *Home Department. Workmen's compensation. Statistics of compensation and of proceedings under the Workmen's Compensation Act of 1906 and the Employers' Liability Act, 1880, during the year 1914. London, 1915. 17 pp.*

It is stated that in consequence of the war it has been necessary to omit this year the usual introductory analysis of the figures and to curtail the tables relating to proceedings in the courts. The statistics of compensation paid under the act of 1906 relate to 7 groups of industries—mines, quarries, railways, factories, harbors and docks, construction work, and shipping. For these industries returns were received from 129,925 employers, of whom 105,491 were included in the collective returns supplied by employers' associations, mutual indemnity societies, etc. These collective reports accounted for 71 per cent of the fatal cases, 70.8 per cent of the compensation in such cases, and 71.2 per cent of the disability cases, and 75.7 per cent of the compensation in the latter, in the 7 industries. Separate returns from 24,961 employers were received, and of these 22,293 reported that there had been no cases of compensation under the act. The number of persons coming within the provision of the act who were employed in the industries above indicated amounted to a little over 7,000,000, or less by one-half a million than the figures for the preceding year, explained as due to recruiting for the army. On the other hand, the total amount of compensation paid shows an increase over the figure for the preceding year, which is explained as due to the occurrence of a single coal-mine accident, resulting in the loss of 440 lives, and to the growing accumulation of long-standing cases, in which payments are continued from year to year.

For 1913 it is estimated that the total charge upon the 7 industries including the cost of management, commissions, legal and medical expenses amounted to about £5,000,000 (\$24,332,500). It was probably not less in 1914, it is stated.

The table which follows shows the number of cases and the amounts of the payments during the year 1909 to 1914:

Year.	Number of cases.			Payments for compensation.		
	Fatal cases.	Nonfatal cases.	Total.	Fatal cases.	Nonfatal cases.	Total.
1909.....	3,341	332,612	335,953	\$2,501,673	\$8,565,906	\$11,067,579
1910.....	3,510	378,340	381,850	2,617,179	10,523,952	13,141,131
1911.....	4,021	419,031	423,052	3,017,984	11,856,006	14,873,990
1912.....	3,509	424,406	428,005	2,759,826	12,686,926	15,446,762
1913.....	3,748	476,920	480,668	2,895,626	13,463,844	16,359,470
1914.....	4,216	437,900	432,116	3,307,916	13,556,263	16,864,179

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The number of persons employed in each industry and the amounts paid for compensation in 1914 and the amount per person employed was as follows:

Industry.	Number employed.	Total compensation.	Compensation per person employed.	
			1914	1913
Shipping.....	251,880	\$993,228	\$3.93	\$3.69
Factories.....	4,995,668	6,320,737	1.26	1.22
Docks.....	124,708	763,201	6.14	5.84
Mines.....	1,946,357	7,279,904	6.96	5.90
Quarries.....	82,709	229,874	2.78	2.47
Construction work.....	90,061	327,637	3.63	3.23
Railways.....	465,728	944,598	2.03	2.03
Total.....	7,057,111	16,864,179	2.37	2.17

In the table which follows cases of compensation are classified for each of the seven industries as to the duration of compensation. In this table cases terminated by the payment of a lump sum are not taken into account, and as a consequence the proportion of cases of disability of long duration will be higher than the figures here indicate, inasmuch as the lump sum cases are usually those in which disability lasts for a considerable period.

Industry.	Percentage of cases terminated in 1914 in which compensation had lasted—					
	Less than 2 weeks.	2 weeks and less than 3.	3 weeks and less than 4.	4 weeks and less than 13.	13 weeks and less than 26.	26 weeks and over.
Shipping.....	4.68	16.65	16.90	46.99	10.39	4.39
Factories.....	9.29	31.15	19.62	35.63	3.40	.91
Docks.....	7.63	23.21	18.53	42.41	5.73	2.49
Mines.....	6.54	36.40	19.42	32.54	3.30	1.80
Quarries.....	10.13	32.36	18.99	32.40	3.71	2.41
Construction work.....	13.44	27.62	17.60	35.49	4.54	1.31
Railways.....	16.47	30.36	17.11	30.40	3.82	1.84
Average.....	8.48	32.94	19.29	34.28	3.55	1.46

The 437,900 cases of disability included 41,494 continued from 1913. During the year 398,343 cases were terminated, leaving 39,557 outstanding. Of the total number of disability cases, 28,213 were settled by payment of a lump sum, and of this number 565 were cases of industrial diseases, for which £30,924 (\$150,492) was paid in compensation. In the remaining 27,648 cases there was paid £764,346 (\$3,719,690) in lump-sum compensation.

During the year there were reported 43 fatal cases due to industrial diseases, in which compensation to the amount of £7,099 (\$34,547) was paid and 9,622 cases of disability, due to the same cause, in which compensation was paid to the amount of £182,551 (\$888,384). Of the disability cases resulting from industrial diseases, 92.4 per cent occurred in the mining industry, and were due chiefly to nystagmus, beat hand, and beat knee, and the remaining 5.6 per cent were cases of lead poisoning.

A fuller survey of the history and operations of workmen's compensation in Great Britain may be found in the twenty-fourth annual report of this bureau, 1909, Volume II, pp. 1495-1695, and a shorter survey of accident statistics and compensation under the act is contained in Bulletin 157 also of this bureau, pages 120-126.

— Local Government Board. *Disabled sailors and soldiers. Report of the committee appointed by the president of the Local Government Board upon the provision of employment for sailors and soldiers disabled in the war. London, 1915. 8 pp.*

This committee, appointed February 16, 1915, to consider and report upon the methods to be adopted for providing employment for sailors and soldiers disabled in the war, submitted its report on May 15.

The deliberations of the committee resulted in the following recommendations: (1) The care of the sailors and soldiers disabled in the war is a duty which should be assumed by the State; (2) this duty should include: (a) the restoration of the man's health where practicable; (b) the provision of training facilities, if he desires to learn a new trade; (c) the finding of employment for him, when he stands in need of such assistance; (3) for the discharge of these duties a central committee should be appointed and empowered to act, either through the agency of the appropriate public department or independently, as the case may be; (4) the central committee should have the assistance of subcommittees for Ireland and Scotland and local committees in any part of the United Kingdom, as may be necessary.

Concerning an enlarged use of these committees the report declares: "It has been suggested to us that an organization so created might ultimately be utilized for the purpose of dealing with the employment of ex-sailors and ex-soldiers of all kinds, whether able-bodied or disabled. The numerous agencies at present engaged on this work in different parts of the country and the complexity of their operations make it highly desirable that some step should be taken to coordinate their activities and to prevent overlapping." (p. 7.)

——— *National Health Insurance Commission (Scotland). Handbook for the use of insurance committees in Scotland. 1st October, 1915. Edinburgh, 1915. 256 pp.*

This handbook, it is stated in the introduction, is intended primarily for the assistance of members of insurance committees and does not profess to be an exhaustive or technical exposition of the powers and duties of committees. The general scheme of administration of the national insurance act in Scotland in force in so far as it relates to health insurance is briefly summarized. Unemployment insurance, which is administered through the board of trade in connection with the labor exchanges controlled by that department, is not dealt with. The handbook is merely a manual for the use of administrative officers under the health insurance act. In the appendix are found a list of the acts and principal regulations and orders relating to health insurance, the constitution and organization of insurance committees, model rules for the administration of medical benefit, a list of local medical committees organized for practice by the commissioners, and a copy of the medical record card, etc.

——— *Report of the Departmental Committee appointed to inquire into the conditions prevailing in the coal-mining industry due to the war. London, 1915. Part I. Report (54 pp.); Part II. Minutes of evidence and index (iv, 248 pp.).*

The MONTHLY REVIEW of July (vol. 1, No. 1) carried the official summary of this report from the Board of Trade Labor Gazette. Seven specific suggestions are made relative to hours of labor, employment of women and of boys, reorganization in the mines, restriction of export, economy in the use of coal, and cooperation between employers and employees. These recommendations are followed by statistical reports showing for the United Kingdom and by coal-mining districts the amount of coal produced, number of persons employed, days of operation, absenteeism of miners, 1913-14, 1914-15, and number of persons employed at coal mines who have been called to military duty. Part II consists entirely of evidence presented to the committee relative to the subject under investigation.

Italy.—*Ministero di Agricoltura, Industria e Commercio. Direzione Generale del Credito e della Previdenza. Infortuni sul lavoro; Giurisprudenza giudiziaria nell'anno 1911. Rome, 1915, 345 pp. (Annali del credito e della previdenza, Series II, vol. 9.)*

Contains a compilation of decisions relating to accident insurance rendered in 1911 by courts of justice, civil courts, courts of appeal and courts of cassation; also an analytical index of the decisions reported.

Italy.—*Ministero di Agricoltura, Industria e Commercio. Le Migrazioni periodiche interne dei lavoratori agricoli (Principali movimenti migratori nel 1913) Roma, 1914, 118 pp. (Supplemento al Bollettino dell' Ufficio del lavoro, No. 25).*

This volume presents statistical data of the periodical internal migrations of agricultural laborers in Italy during the year 1913. The individual chapters deal with migration for the hulling and harvesting of rice (May, June); migration to the Provinces of Foggia (May to July and August to December), Potenza (May to July), Rome (May to July and August to December) and Grosseto (August to December). For each of these forms of migration are shown the number of emigrants, by sex; the days of absence and of work; the means of transportation used; the districts to which the emigration was directed; the earnings of the emigrants (total and per day); the number of immigrants, days of absence from work and days of labor as well as the daily wages current in the various districts. There is no summary statement for all industries combined.

New Zealand.—*Department of Labor. Twenty-fourth annual report of the Department of Labor, 1915. Wellington, 1915. 43, 10, 5 pp. Folded diagrams.*

This report covers the period from April 1, 1914, to March 31, 1915, and gives data, with summary statistics from 1891 to 1915, on the following matters: Conditions of trade and employment; employment of workers wounded in the war; census of factories and factory workers; wage statistics; overtime worked; certificates of fitness issued to boys and girls to work in factories; accidents in factories; enforcement of the shops and offices act; strikes; conciliation and arbitration; registration of industrial unions and associations; recovery of arrears of wages due to workers; enforcement of compensation act, scaffolding inspection act, servants' registry act, shearers and agricultural laborers accommodation act, and wages protection and contractors' lien act; women's employment offices; workers' dwellings; departmental publications; and cost of living index numbers.

When the war broke out in August the effect was disastrous to industries and employment throughout the Dominion, the report declares. The panic which followed lasted until toward the end of October, when, with the advance of spring, rapid recovery was made to normal conditions.

During the winter and the first few months of the war the department cooperated with the municipalities in most of the chief and secondary towns in an endeavor to provide employment for local workers. Representative committees were organized which did valuable work in this connection.

It was realized that as the outcome of the war, one of the many problems to be faced would be that of finding suitable employment for workers wounded in the war who return to New Zealand unable to follow their former occupations. The report announces that proposals for measures for the training of such persons in new methods of handling tools will shortly be submitted.

The number of men for whom employment was found by the Men's Bureau in the 10-year periods and individual years indicated was as follows:

Period.	Number of male applicants placed in—		
	Govern- ment work.	Private work.	Total.
1891-1901.....	17, 140	9, 708	26, 848
1901-1911.....	32, 657	25, 276	57, 933
1911-12.....	2, 285	3, 450	5, 735
1912-13.....	2, 143	3, 705	5, 848
1913-14.....	2, 140	3, 505	5, 645
1914-15.....	3, 842	3, 673	7, 515
Total.....	60, 207	49, 317	109, 524

The number of domestic servants and other women workers (generally) assisted to employment by women's employment branches during the year totals 2,165, an increase of 2 over the previous year.

There was expended by the department in the payment of fares for persons to their places of work since the year 1910 the sum of £11,665 (\$56,768) of which 97 per cent had been repaid. The number of factories and factory workers for specified years was as follows:

Year.	Factories.	Factory personnel. ¹
1894-95.....	4,109	29,879
1904-5.....	9,123	67,713
1913-14.....	13,469	87,517
1914-15.....	13,937	88,812

¹ Inclusive of employers, managers, etc., whose total number for the year 1914-15 was 15,031 or, as may be calculated from other parts of the report, about 17 per cent of the total.

During the year ending March 31, 1914, £7,264,029 (\$35,350,397) were paid out to factory workers in wages. A considerable increase (60,788 hours) in the overtime worked in factories is reported for this year as compared with the preceding year when the overtime hours totaled 274,888 as against 335,676 for the year just ended. There is again reported a decrease in the number of certificates of fitness granted to workers under 16 years of age to work in factories. Last year certificates were granted to 937 boys and 1,251 girls or a total of 2,188. This year the figures are 952 boys and 1,136 girls, a total of 2,088, showing a decrease of 100.

The number of accidents reported in 1914-15 was 967 or 10.88 per 1,000 workers employed in factories which is much less than for the previous year (12.61).¹ Only 4 strikes, all of minor importance, were reported for the year just ended as against 35 for the preceeding year. The registration of industrial unions and associations shows that 403 unions of workers with 73,991 members and 149 employers' associations with 5,819 members existed in New Zealand on December 31, 1914, while on December 31, 1913, the number of workers' unions was 372 and that of employers' associations 134, with a membership of 71,544 and 4,700, respectively. Under the Factory Act, 21 prosecutions were taken before the court as against 64 in 1913, and under the Shops and Offices Act 115 as against 252 for the preceding year. Convictions were obtained in all cases relating to the Factory Act and in 103 cases relating to the Shops and Offices Act. Under the Workers' Dwellings Acts of 1905 and 1910 a total of 548 dwellings have so far been erected which are being paid for on easy payment plans by the workmen purchasing them. The average weekly installment inclusive of fire insurance, but excluding taxes, is 13s. 10d. (\$3.36) for 4-room dwellings and 14s. 11d. (\$3.63) for 5-room dwellings.

The expenditures of the department of labor during the year ending March 31, 1915, exclusive of the salaries of the judges and members of the court of arbitration, amounted to £28,141 17s. 5d. (\$136,952.41).

Norway.—*Beretning om de norske jernbaners drift, 1. July, 1913-30, June, 1914, Christiana, 1915, 328 pp. (Norges officielle statistik, VI, 37).*

(Contains statistics of railways in Norway for the fiscal year ending June 30, 1914. The total mileage reported at the beginning of the year was 3,085.5 kilometers (1,917.2 miles); and at the end of the year it was 3,164.7 kilometers (1,966.4 miles). Of this mileage 2,710.5 kilometers (1,684.2 miles) constituted State roads, and 454.2 kilometers (282.2 miles) were owned by private companies. The State roads are of two kinds,

¹ If these rates were calculated on the basis of the number of employees properly speaking, i. e., excluding employers, superintendents, etc., the rates for these years would be 13.11 and 15.33 per 1,000 workers, respectively.

those wholly owned and operated by the State, and those which the State operates but in which it owns a share, private companies and municipalities being part owners. In the case of this latter type of State road the Government is forbidden to purchase the shares of the private companies or municipalities except in the case of one line, which is made a special exception. Of the State mileage indicated above, 739.4 kilometers (459.4 miles) constituted lines wholly owned and operated by the State and 1,971.1 kilometers (1,224.8 miles) consisted of lines in which the State was a part owner.

On June 30, 1914, the permanent employees of the roads in Norway numbered 7,479, of whom 5,946 were employed on the State roads, 1,089 on the Capital Line (*Hovedbanen*) classed as a privately owned company and operated jointly by the State and by its English owners, and 444 employed on other private roads.

Until June 25, 1914, only the higher grade of employees were members of the pension relief fund organized for the State railroad system of the country, but after that date the employees of the operating department were required to become members.

At the end of the fiscal year 1913 the fund had a balance of 10,096,367.68 crowns (\$2,705,826.54), while at the end of the fiscal year June 30, 1914, this had increased to 10,796,875.89 crowns (\$2,893,562.7). Statistics of the pension fund for the State railroads for the fiscal years 1910 to 1914 follow:

STATISTICS OF THE PENSION FUND FOR THE NORWEGIAN STATE RAILROAD SYSTEM,
1910-1914.

Fiscal years ending June 30.	Number of members.	Average number in receipt of pensions.		Amount paid in pensions (nearest dollar).	Average pension.	
		Number.	Per cent of total members.		Amount.	Per cent of average annual earnings.
1910.....	4,648	321	6.9	\$47,449	\$147.94	37.3
1911.....	5,009	335	6.7	50,049	149.28	38.7
1912.....	5,326	363	6.8	55,000	151.42	39.2
1913.....	5,699	383	6.7	61,964	161.87	42.1
1914.....	6,115	402	6.6	70,678	175.81	38.6

——— *Departementet for Sociale Saker, Handel, Industri og Fiskeri. Arbeidsledighet og Arbeidsledighetskasser. Christiania, 1915. 71 pp. (Norges officielle statistik, VI: 34).*

This report on unemployment and unemployment relief funds was prepared by the department of social welfare, commerce, industries, and fisheries of the Norwegian Government and has already appeared as part of a report of a special committee of the department appointed to inquire into the advisability of amending existing laws on State subsidies for unemployment insurance. This edition of it appears as a separate one in the general series of Norwegian official statistics. For the report of the above-mentioned committee reference may be made to the summary of it which appeared in the October issue of this REVIEW (pp. 101, 102). As to the scope and nature of the statistics contained in the report reference may also be made to the same number of the REVIEW, which presented an outline of the scope of unemployment statistics in foreign countries (pp. 71, 72).

——— *Kirke-og Undervisningsdepartementet. Fagskolestatistik 1911/12-1913/14. Christiania, 1915. 71 pp. (Norges officielle statistik, VI:40.)*

Contains statistics of industrial schools in Norway as of the years 1911-12 to 1913-14. Data give number of schools, number of instructors, number of pupils (classified as to age and occupation in some instances), finances, expenses and receipts, etc., shown separately for each group of institutions without a summary presentation.

——— *Statistiske Centralbyraa. Husholdningsregnskaper for handelsfunktionærer m. v. Utgit av det Statistiske Centralbyraa. Christiania, 1915. 44 pp.*

Contains an analysis of 19 family budgets, collected generally from persons of small incomes, during the year 1912, which had been kept by office and commercial

employees, one of whom was a Government postman. Nine of the families resided in Copenhagen. The report consists of a summary in French, a presentation of the different items of expenditures and receipts classified by income groups for each separate family of the 19 included, followed by an account of family expenditures and incomes, kept by a civil-service employee of small means during the years 1898 to 1914, and an analysis of a single budget of a family having an income somewhat above the limit included in the general study. The report shows for each family its income and expenditures, the number of persons, and the occupation of the head of the family. Expenditures by different items of expenditure are shown for each family as a whole and the average for each individual. For the purposes of the inquiry not the actual number in the family was taken, but a theoretical number of units of consumption as calculated on the basis of the ascertained amount of food necessary to maintain an individual in proportion to his age and sex. This unit taken was that of an adult man, 19 years of age and over, and other members of the family were given a value in proportion to the amount ascertained as necessary to meet the requirements of the adult man. These proportions were as follows:

An adult woman.....	0.8	Boy, 15 and 16.....	0.7
Children:		Girl, 15 and 16.....	.6
3 years and under.....	.1	Boy, 17 and 18.....	.9
4 to 6 years.....	.2	Girl, 17 and 18.....	.7
7 to 9 years.....	.3		
10 to 12 years.....	.4		
13 to 14 years.....	.5		

These are the standards accepted by previous Swedish and Finnish investigations of a similar kind. They differ slightly from those of the American or Atwater standard.

The following table presents a summary of the average annual expenditures, classified by different items of expenses, of all the 19 families included in the investigation:

AVERAGE EXPENDITURES OF 19 FAMILIES, BY ITEMS, 1912.

Items of expenditure.	Average expenditure per family having an income of—			Unit persons in family having an income of—			Per cent of expenditure per family having an income of— ¹		
	3,000 kr. (\$804) or less per an-num.	Over 3,000 kr. (\$804) per an-num.	All income classes.	3,000 kr. (\$804) or less per an-num.	Over 3,000 kr. (\$804) per an-num.	All income classes.	3,000 kr. (\$804) or less per an-num.	Over 3,000 kr. (\$804) per an-num.	All income classes.
Food.....	\$176.08	\$295.34	\$220.03	\$83.35	\$98.36	\$90.05	31.10	24.13	28.53
Spirituos liquors.....	5.36	23.59	12.06	2.41	8.04	4.82	.95	2.26	1.44
Tobacco.....	4.82	5.09	4.82	2.41	1.61	1.88	.84	.49	.71
Clothing.....	77.72	157.85	107.20	36.99	52.53	43.95	13.86	12.92	13.51
Rent and housing.....	85.49	161.87	113.63	40.47	54.14	46.63	14.93	13.49	14.40
Fuel and light.....	27.34	43.68	33.50	12.86	14.74	13.67	4.84	3.70	4.42
Laundry, cleaning.....	13.13	28.41	18.76	6.16	9.38	7.77	2.30	2.66	2.43
Furniture.....	25.73	42.61	32.16	12.33	14.20	13.13	4.89	3.39	4.34
Medical care and medicine.	5.63	14.20	8.84	2.68	4.82	3.48	1.02	1.16	1.07
Insurance.....	12.86	23.59	16.88	6.16	7.77	6.97	2.11	1.91	2.04
Taxes.....	23.05	53.06	34.04	10.99	17.68	13.94	4.06	4.49	4.22
Books, postage, stationery.	10.18	15.54	12.06	4.82	5.09	5.09	1.65	1.41	1.56
Care of real estate.....	.54	11.26	4.56	.27	3.75	1.88	.16	.90	.43
Interest, etc.....	26.80	83.08	47.46	12.60	27.60	19.56	3.93	6.50	4.88
Savings.....	2.14	2.41	2.41	1.07	.80	1.07	.34	.15	.27
Miscellaneous.....	71.29	234.77	131.59	33.77	78.26	53.87	12.49	19.66	15.13
Garden expenses.....	1.07	.54	.80	.54	.27	.27	.18	.04	.13
Sundries.....	2.14	8.31	4.29	1.07	2.68	1.88	.35	.74	.49
Total.....	571.37	1,205.20	805.09	270.95	401.72	329.91	100.00	100.00	100.00

¹ As given in the report. When based on the figures here given they vary somewhat from those given in the original source.

Ontario.—*Bureau of Mines, Twenty-fourth annual report, 1914. Toronto, 1915. 25 pp.*

Report of mining operations in the Province of Ontario for the calendar year 1914. Part I contains statistical review, 1911–1914; mining accidents; productive area; geological and metallogenetic epochs in the Pre-Cambrian period. Part II contains data relating to oil and gas wells.

The number of serious accidents reported for 1914 in and about mines, quarries, etc., subject to the mining act, was 359, resulting in the death of 38 persons and injury to 328 other persons; in metallurgical work 104 accidents, causing 5 deaths and 101 injuries; and in quarries, clay and gravel pits 30 accidents, causing 15 deaths and 16 injuries to persons.

Of fatal mine accidents, 7.9 per cent were due to falls of ground, 26.3 to shaft accidents, 26.3 to explosives, 15.8 miscellaneous underground accidents, and 23.7 to accidents at the surface. The following table shows the number of fatal accidents in mines, metallurgical works, and quarries for the period 1901–1905, 1906–1910, and by years 1911, 1912, 1913, and 1914, with the number of persons employed, and number of fatal accidents per 1,000 employed persons.

	1901–1905	1906–1910	1911	1912	1913	1914	Total.
Persons killed in metallurgical works and mines.....	46	177	49	43	64	58	437
Number of persons employed...	22,250	45,664	14,543	15,108	16,293	15,861	129,819
Number of deaths due to accidents per 1,000 employees.....	2.02	3.88	3.37	2.84	3.93	3.66	3.37

Detailed descriptions of the different methods adopted in the organization of safety departments in various mines and the results of that work are given. An amendment to the mining law, regulating the construction of cages and skips so as to afford greater safety became operative January 1, 1915.

The Russian Yearbook for 1915, compiled and edited by N. Peacock. London [1915]. 623 pp.

Although this is a private publication, it has been listed here by reason of its usefulness as a source of information concerning a country whose language is rather inaccessible and because it contains a special chapter relating to labor matters in Russia.

The volume contains the usual information found in books of this sort, presenting data concerning such topics as governmental administration, commercial law, population, education, agriculture, mining, transportation, trade and commerce, customs duties, finances, etc. There are also special chapters on peasant industries, public health, economic development in Siberia, and on labor. This latter chapter contains a summary of the labor laws in force in Russia, some statistics regarding factories and employees, industrial accidents, average earnings of labor, employment of women and children, cooperation and credit associations, and agricultural labor.

A statement of the principal events of the present war is given in a separate chapter, together with a statement concerning the temperance legislation in Russia connected therewith.

The volume is supplied with a somewhat full index in addition to the table of classified contents.

Sweden.—*Kommerskollegium. Textil och beklädnadsindustrien. Specialundersökning av Kommerskollegium. Stockholm, 1914. vii, 476, viii, 168 pp.*

This volume constitutes the first of a series of nine special investigations proposed to be undertaken by the Swedish Board of Trade regarding conditions in the leading industries of Sweden. The investigation which is here reported was undertaken November 22, 1912, and relates to the textile and clothing industries. The report is an extremely detailed, historical, and descriptive survey of the industry, with particular reference to conditions prevailing in 1912. The first 58 pages are devoted to a discussion of the economic significance of the factory system, the relations of the State to industry, the growth of large-scale production, and a survey of recent developments in the cotton, woolen, and other textile industries. Pages 59–230 comprise a historical and statistical account of the textile industry in Sweden down to 1912. The principal part of the volume, however, namely, pages 231–476, presents detailed statistics of the textile and clothing industry in 1912. An appendix of 168 pages contains a directory of Swedish clothing manufactures for 1913, giving their names, addresses, capital invested, number of persons employed, number of power machines operated, product manufactured, and the value of the product for the year, and in connection with each firm an illustrated cut of its trade-mark is shown.

The investigation adopts as the unit of its inquiry, not the ordinary establishment or plant, but rather an industrial enterprise as a whole for which a single set of account books are kept. If, however, the undertaking consists of several establishments located in different places, each group of establishments is enumerated as a separate undertaking. The inquiry, furthermore, relates to factory establishments as distinguished from household and hand industries. It includes only those industries turning out annually a product valued at 10,000 crowns (\$2,680) and over.

For the textile industry proper 278 establishments reported out of a possible total of 288. The largest number, or 98, were engaged in the manufacture of woolen products, and the next largest, or 48, manufactured cotton products. For the clothing industry 124 out of a total of 144 were included in the inquiry, and of the number reported 38, or the largest portion, were engaged in the manufacture of clothing proper; 33, or the next largest portion, were engaged in the manufacture of hats and caps; while 32 were engaged in the manufacture of white goods of various kinds.

The following two tables present the statistics of the working force employed in the textile and clothing industries of Sweden as reported for the year 1912:

DISTRIBUTION OF EMPLOYEES AND WAGES PAID IN THE CLOTHING INDUSTRIES IN SWEDEN, 1912.

Branches of industry.	Factory workers.			Home workers.		
	Number of employees, including foremen.	Foremen.		Wages paid.	Number.	Wages paid.
		Not participating in actual work.	Participating in the work.			
Hat and cap manufacture.....	1,778	28	48	\$361,076. 40	89	\$12,450. 74
Clothing manufacture, proper.....	3,527	18	250	597,851. 72	2,385	323,624. 74
White goods, etc , manufacture....	2,029	16	44	328,385. 76	313	20,211. 76
Shoddy, waste, etc., manufacture..	311	.....	15	53,047. 12	.....	.....
Umbrella, etc., manufacture.....	112	6	23,929. 45
Not specified.....	190	5	6	57,133. 31
Total.....	7,977	67	369	1,421,423. 76	2,787	356,287. 24

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DISTRIBUTION OF EMPLOYEES AND WAGES PAID IN SWEDISH TEXTILE INDUSTRY, 1912.

Branches of industry.	Factory workers.			Home workers.	
	Number of employees including foremen.	Number of foremen.	Wages paid.	Number.	Wages paid.
Woolen mills:					
Spinning.....	226	18	\$41,549.92		
Yarn spinning.....	947	58	157,168.33		
Weaving.....	1,425	42	268,968.12	20	\$1,567.80
Spinning and weaving.....	8,569	352	1,714,434.59	160	10,318.27
Total.....	11,167	470	2,182,140.96	180	11,886.07
Cotton mills:					
Cotton yarn.....	442	21	85,483.42		
Spinning.....	1,477	39	240,313.97		
Weaving.....	3,573	103	612,739.66	278	17,114.48
Spinning and weaving.....	8,036	266	1,585,920.55		
Total.....	13,528	429	2,533,457.60	278	17,114.48
Linen mills:					
Weaving.....	211	7	29,922.20	210	2,144.00
Spinning and weaving.....	1,754	43	323,486.99		
Total.....	1,965	50	353,409.19	210	2,144.00
Jute mills.....	1,533	19	272,900.11	215	4,118.36
Hosiery mills.....	4,030	76	677,502.93	1,509	90,314.06
Curtains, tapes, etc., mills.....	1,290	50	236,559.31		
Rope, cord, etc.....	412	24	78,404.20		
Dyeing, finishing, etc.....	908	37	204,641.05		
Total textiles.....	34,833	1,155	6,539,015.35	2,392	125,577.57

Switzerland.—*Zentralstelle schweizerischer Arbeitsämter. Zehnter Geschäftsbericht für das Jahr 1914. Zürich, 1915. 41 pp.*

This is a report of the central office of the Swiss public employment bureaus as to the activities of the affiliated local bureaus during the year 1914. In the report are included 15 employment bureaus which in 1914 placed 62,952 applicants for positions as against 54,868 in 1913. The Federal Government subsidized these bureaus to an amount of 55,662 francs (\$10,743). Article 6 of the Federal act relating to the promotion of public employment bureaus provides that under certain conditions Federal subsidies may also be granted to employment bureaus organized by trade associations. This provision was applied for the first time in practice when a subsidy was granted to an employment bureau of the Swiss printing trades conducted jointly by the employers and employees.

The table which follows shows the number of applications for work made to the federated bureaus during the years 1911 to 1914, inclusive, and the number of applicants per 100 vacancies reported.

Month.	Number of applicants.				Number of applicants per 100 vacancies reported.			
	1911	1912	1913	1914	1911	1912	1913	1914
January.....	14,225	17,609	19,454	20,301	303	332	358	392
February.....	12,497	16,222	16,343	18,575	264	248	262	314
March.....	12,441	14,992	17,566	19,372	159	171	215	216
April.....	12,223	15,504	18,648	18,161	172	187	215	182
May.....	13,995	16,034	18,906	18,581	178	184	225	213
June.....	12,534	14,792	18,353	17,850	167	187	231	215
July.....	15,129	16,609	20,113	19,343	211	198	295	242
August.....	16,397	16,306	19,607	24,069	216	214	279	349
September.....	16,070	17,322	20,138	16,052	202	210	257	257
October.....	17,908	18,011	20,929	15,525	252	237	271	252
November.....	16,928	17,742	20,833	16,164	291	298	378	285
December.....	14,967	15,829	18,995	17,076	343	366	416	289
Total.....	175,314	196,972	229,890	221,069	220	234	276	252

The following table shows the number of applicants per 100 vacancies and the number of nonregistered applicants (applicants not residing within the district of employment bureaus):

Month.	Number of applicants per 100 vacant situations.		Number of non-registered applicants.	Month.	Number of applicants per 100 vacant situations.		Number of non-registered applicants.
	Male.	Female.			Male.	Female.	
January.....	198	84	12,675	July.....	127	73	11,266
February.....	162	79	11,713	August.....	217	176	9,386
March.....	123	74	9,847	September.....	160	133	5,564
April.....	114	68	8,305	October.....	165	155	5,043
May.....	129	72	9,092	November.....	190	155	5,443
June.....	128	71	8,787	December.....	188	126	6,429

An attempt begun August 1, 1914, to place urban workmen in the country districts proved a failure. According to the report the public employment bureaus received thousands of applications from workers willing to go to the country, but all efforts to place them were, with a few exceptions, without avail. The expected large demand for agricultural workers was not realized, and it has now become evident that the rural population does not sympathize with these attempts of the federated employment bureaus. The reason for this attitude in the rural districts is explained as due to the strong sense of independence on the part of the farmers and their distrust of urban workmen, who were declared to be unfamiliar with the work in the country. It is hoped, however, inasmuch as their failure to place agricultural help in the country was not due to the faulty organization of the bureaus, that this unsuccessful experience will not detain the bureaus from continued energetic endeavor to place urban workmen in agricultural districts.

To relieve unemployment the Federal government decided to expend a certain amount for public works, and in connection therewith, as all government construction work is done by private contract, it gave instructions on October 29, 1914, that all contractors secure their labor as far as possible through the cantonal and municipal bureaus subsidized by the state.

In discussing the conditions of the labor market the report declares that industrial conditions were generally depressed at the beginning of 1914; that conditions in the building trades and like industries slightly improved in the spring but declined again the latter part of the year; that the embroidery industry suffered from the decrease of exports, and that the watch industry suffered through disturbances of various kinds.

The outbreak of the war caused a cessation of railroad traffic in general as well as closing up exports. The building industry practically ceased operation. Unemployment prevailed largely among hotel and restaurant employees. The situation was relieved, however, by the demand for agricultural laborers and for mechanics in the countries at war.

Victoria.—*Registrar of Friendly Societies. Report for the year 1914. Melbourne, 1915. 7 pp.*

This is the twenty-fifth report of the Registrar of Friendly Societies made in pursuance of the Friendly Societies act and the Trade Union act, both of 1890. These are voluntary societies organized to provide relief of various kinds for their members in case of sickness, old age, disability, or by reason of other infirmity. They are subject to a certain amount of government control which involves an audit of their expenses and valuation of their property from time to time, but they are not considered as incorporated societies. Their activity was somewhat extended by a special act in 1914, which permitted them to make contributions for war relief to their members out of their sick benefit and funeral funds. Also subject to the supervision of the Registrar of Friendly Societies are the operations of building societies, provident societies, and trade unions.

The following statistics are reported for the year 1914:

Friendly Societies registered.....	4
Branches of Friendly Societies.....	49
Provident Societies registered.....	5
Building Societies.....	1

No comparative statistics for preceding years are presented, nor is there any summary of the total number of societies of various kinds in existence at the close of the year.

PERIODICAL PUBLICATIONS RELATING TO LABOR.

LABOR DEPARTMENTS AND BUREAUS.

Canada.—*The Labour Gazette issued by the Department of Labour by order of Parliament. Ottawa.*

November, 1915.—Notes on current matters of industrial interest; Industrial and labour conditions during October, 1915; Reports of local correspondents; Reports of women correspondents; Operations under the industrial disputes investigation act, 1907, during October, 1915; Report of the United States Commission on Industrial Relations; Labour legislation in Nova Scotia; Trade union membership in Great Britain in 1914; Annual convention of the Canadian Federation of Labour; Reports of employment bureaus; Changes in wages and hours of labour during the third quarter of 1915; Bulletin of the United States Bureau of Labor Statistics on index numbers of wholesale prices in the United States and foreign countries; Prices—wholesale and retail, Canada, October, 1915; Fair wages schedules in government contracts, October, 1915; Trade disputes, October, 1915; Industrial accidents, October, 1915; Immigration and colonization; Building permits, October, 1915; Recent industrial agreements; Notes on official reports; Recent legal decisions affecting labour.

Denmark.—*Statistiske Efterretninger udgivet af det Statistiske Departement. Copenhagen.*

October 30, 1915 (No. 22).—Land sales and valuations, 1914; Mortgage and other credit institutions, 1914; Production of peat in Denmark; Retail prices, October, 1915; Municipal tax rates; Trade unions in Denmark, 1914; Unemployment, August, 1915; Automobile statistics; Index numbers of the Economist; Brief notices.

November 17, 1915 (No. 23).—Use of power in Danish industry; Savings and other banks during the second half year of war; Index numbers of the Economist.

France.—*Bulletin du Ministère du Travail et de la Prévoyance Sociale. Paris.*

July, August, 1915.—Social movement—France: Inquiry concerning industrial and commercial activities, July, 1915; Strikes, July, August, 1915; Mine labor, June, July, and August, 1915. Work of the mixed commissions in the departments for the adjustment of employment; National unemployment fund; Central office for placing refugees and the unemployed; Progress of cooperative credit societies, January 1, 1914; Economic situation expressed in index numbers, second quarter, 1915. Foreign countries—Germany: Labor market, May and June; Unemployment since the outbreak of the war; Compulsory coal syndicate; Cost of living in Berlin. Austria: Unemployment among trade unions, February to May, 1915; Employment office reports; Unemployment, 1914; Cost of living in Vienna; Collective agreements, 1912. United States: Monthly Review of the Bureau of Labor Statistics; Results of the thirteenth census. Great Britain: Review of the labor market, June and July; Strikes; Employment reports; Old age pensions, 1909–1914; Employees in munition factories; Mines and quarries, 1914. Italy: Inquiry concerning returned immigrants and unemployment resulting from the war. Norway—Unemployment, 1914. Switzerland: Swiss federation of labor, 1913, 1914. Miscellaneous: Reports of the industrial courts (*Conseils de prud'hommes*) second quarter, 1915; Foreign commerce with France, January to July, 1915; Wholesale prices, July, August, 1915. Laws, decrees, orders, circulars, etc., on matters of interest to labor; Legislative program; Court decisions.

Germany.—*Reichsarbeitsblatt, herausgegeben vom Kaiserlichen Statistischen Amte, Abteilung für Arbeiterstatistik. Berlin.*

October, 1915.—Labor market in Germany, October, 1915; Labor market in foreign countries (Great Britain, Switzerland, British Colonies); Employment offices and unemployment: Unemployment in German trade unions, third quarter, 1915; Unemployment in foreign countries (Netherlands, July, 1915; New York State, first six months, 1915); Economic conditions during the war: Cooperative stores during the war; Agricultural war measures in France; Welfare work for disabled soldiers; Woman and child labor in the United States; Wage statistics of the Leipsic Local Sick Fund. Social Insurance: Welfare work of the State Invalidity Insurance Institute of the Hanse Towns; Care in invalid homes; Activity of the workmen's accident insurance institute for the Kingdom of Bohemia, 1889–1915; Activity of the industrial and commercial courts; Labor market statistics.

Great Britain.—*The Board of Trade Labor Gazette. London.*

November, 1915.—Employment chart. The labor market in October. Reserved occupations committee. Special articles on the war and employment in France; Employment in Germany in September; Retail food prices in the United Kingdom, October, 1915, and in Berlin and Vienna; Rise in the cost of living in Christiania; Profit sharing in the United Kingdom in 1914–15; Produce of corn and hay crops in England and Wales; The replacement of men clerks of military age; Home production of food; Trade unions in New York State in 1914; Commonwealth of Australia: Quarterly statistics; Reports on employment in the principal industries; Labor in the Dominions; Labor in foreign countries; Board of Trade labor exchanges. Statistical tables: Trade disputes; Changes in rates of wages; Prices of wheat, flour, and bread; Diseases of occupations; Fatal industrial accidents; Unemployment insurance; Pauperism; Foreign trade; Distress committees; Passenger movement to and from the United Kingdom. Legal cases, official notices. etc.

Italy.—*Bollettino dell' Ufficio del Lavoro, Ministero di Agricoltura, Industria e Commercio. Rome. (Semimonthly.)*

November 1, 1915.—Investigations and provisions relative to unemployment; Labor market, by localities and industries; Labor disputes; Retail prices, September, 1915; Employers and employees associations; Congresses and conventions; Labor legislation: Royal decree of May 2, 1915, creating the Roman Cooperative Institute (Istituto Romano dei Consumi); Decree of September 23, 1915, providing that the validity of deliberations of consultative councils or committees instituted in the Ministry of agriculture, commerce, and industry shall not be impeded by the absence of members on account of military service. Decree of September 30, 1915, providing for the functioning of industrial courts and conciliation commissions during the war; Activities of the office; Application of labor laws; Employees in public transportation service; Decisions of courts.

Netherlands.—*Maandschrift van het Centraal Bureau voor de Statistiek. The Hague. October, 1915.*

October, 1915.—Review of the labor market, third quarter, 1915, and for October, 1915 (dock labor and fishing); Employment of interned soldiers in the Netherlands, October 23; Unemployment among trade union members, September, 1915; Reports of labor exchanges, September, 1915; Strikes and lockouts, September, 1915; Collective agreements; Minimum wages and maximum hours of labor on government work, October, 1915; Miscellaneous reports concerning labor; Trade-union activities; Wholesale and retail prices, October, 1915; Maximum prices as fixed by government decree; Passports issued, September, 1915; Court decisions, etc.; Miscellaneous reports of social and economic import (building activities, dock labor, invalidity premiums, industrial accidents, housing, war measures, cooperation, etc.); Foreign countries

and the war; Reports from foreign countries on the labor market, employment exchanges, industrial accidents, strikes, and lockouts, prices, etc.; Statistical tables on the labor market, employment exchanges, prices, building and housing, factory licenses, industrial diseases, State revenues, etc.; Laws, general regulations, ministerial decrees and circulars relating to the conditions of service for railroad employees, workmen's housing, the State budget, survivors' insurance, etc.

New South Wales.—*Industrial Gazette issued by the Department of Labor and Industry. Sidney.*

October, 1915.—Introductory matter. The industrial situation, September, 1915: Industrial arbitration and the war; Emergency legislation; Dislocations in industries; Employment and unemployment. The statute law of industrial import in the State of New South Wales; Index of factories registered, August 31, 1915, by provincial districts; Opinions of the department upon industrial arbitration laws. Judicial and quasi-judicial proceedings (relative to industrial arbitration, very largely). Departmental records, September, 1915: Chief inspector of factories' office; Gas examiner's office; Industrial registrar's office; Investigation office; Labor exchanges. Records of industrial boards; Industrial agreements as of October 13, 1915; Industrial arbitration awards as of October 13, 1915. Labor exchange supplement No. 7.

New York.—*The Bulletin, issued monthly by the New York State Industrial Commission. Albany, N. Y.*

December, 1915 (vol. 1, No. 3).—Appointment of deputy commissioners; Activities of the legal bureau; Compensation items; Fire prevention rulings; State insurance fund; Recent decisions of interest to labor; Reports from the Bureau of inspection; The labor market; Reports from the Bureau of mediation and arbitration; Industrial hygiene; Bureau of printing.

New Zealand.—*Journal of the Department of Labor. Wellington.*

October, 1915.—Conditions of employment and trade; Women's employment branches (reports); Unions' reports; Recent legal decisions; Workers' compensation act, cases under. Statistical: Persons assisted to employment during September, 1915; Cooperative works in New Zealand; Accidents in factories reported up to September 27, 1915; Accidents reported under the Scaffolding inspection act; Additional unions registered under the Industrial conciliation and arbitration act, 1908; Current retail prices, September 15, 1915; Retail prices, September quarter, 1915. Special article: The war and its effect on work and wages (Fortnightly Review).

Pennsylvania.—*Monthly bulletin of the Pennsylvania Department of labor and industry. Harrisburg.*

August, 1915.—Report on third annual meeting of the American Association of public employment offices, Detroit, Michigan; Experience of the Hart, Schaffner & Marx Company with collective bargaining; Efficient guards; The value of asbestos curtains; Accidents reported to the department during July, 1915; Safety for the children; Traveling safety exhibit; Sidewalk elevators of department stores; Proceedings of Second annual conference on welfare and efficiency (continued from July Bulletin).

Spain.—*Boletín del Instituto de Reformas Sociales. Publicación Mensual. Madrid.*

August, 1915.—Report of the Secretary's office and the special divisions; Report of Public Institutions making loans to persons of small means; Legislation (cooperative associations, etc.); Proposed legislation; The unemployment problem in Canada; Proposed law on accident compensation in Chile.

September, 1915.—Report of the Secretary's office and the special divisions; Cooperative savings; Protection of infants; Legislation (industrial schools, concession of State lands for the establishment of agricultural colonies); Strikes and lockouts in

Canada and France; Proposed law of Argentina regulating employment on Street railways; Law exempting definite portions of the wages, salaries, annuities, etc., of laborers from proceedings of attachment, execution, or seizure; Postal savings law.

October, 1915.—Report of the Secretary's office and the special divisions; Legislation (industrial schools; fixing export duty on grain; extending the list of articles the exportation of which is prohibited); Decree establishing a voluntary mutual retirement system. Germany: Strikes and lockouts; Royal decree regulating prices of prime necessities, especially food prices. Austria: Employment of prisoners of war. Russia: Circular directing the labor inspection service to endeavor to bring together those in search of labor and employers in need of laborers.

Sweden.—*Socialstyrelsen. Sociala Meddelanden. Stockholm.*

No. 10, 1915.—Temporary restrictions on the consumption of alcoholic liquors; Measures in favor of the workmen to offset the high cost of living; War measures in foreign countries (Germany); Proposed law on compulsory accident insurance; Sanitary provisions affecting houses in the proposed draft of the State health ordinance; Safety measures in quarrying; Reports of the factory inspectors on fatal industrial accidents; Registrations under the new sick-benefit law, third quarter 1915. Brief notices; Institute for the study of hygiene of occupations, Berlin; Exemptions allowed as to the hours of labor of women and young persons; Report of the state insurance institute, January to December, 1915; The Labor market in Germany, August to September, 1915; The Labor market in England, September, 1915; Furlough to those in military service for harvest purposes; The housing question in Gothenberg; Statistics of alcoholic consumption, its social effects, etc.; Intermunicipal committees on the cost of living; Cost of living in Swedish cities; Potato consumption in Germany; Cause of increase in the cost of living in Berlin; Maximum prices of certain foods in Christiania; Maximum prices of salted herring in Norway; Increase in the cost of living in Australia; Public employment exchanges in Sweden, 1915; Retail prices and cost of living in Sweden, 1904 to September, 1915; Prices of cattle on the hoof, 1904 to September, 1915; Fish prices in Stockholm in September, 1914 and 1915.

MISCELLANEOUS.

Germany.—*Vierteljahrshefte zur Statistik des Deutschen Reichs. Herausgegeben vom K. Statistischen Amte. Berlin.*

Third quarter, 1915 (Vol. 24, No. 3).—Boiler explosions, 1915; Live stock prices in 10 German cities and in foreign countries, second quarter, 1911–1915, and in German markets, by months, 1911–1914; Produce exchange prices of potatoes in 4 German cities, 1905–1914; Preliminary statistics of strikes and lockouts, second quarter, 1915; Changes in the number and capital of German stock companies and companies with limited liability, second quarter, 1915; Bankruptcy statistics, 1914; Live stock census in Germany, December 1, 1914.

Italy.—*Bollettino dell' Ispettorato dell' industria e del lavoro. Ministero di Agricoltura, Industria e Commercio, Ufficio del Lavoro. Rome (Bimonthly).*

July–August, 1915.—News relating to the personnel of the Inspection Service; Activities of the inspectors during July and August, 1915; Administrative orders; Investigations and reports; The development of electrometallurgical and electrochemical industries in Lombardy and Venice in connection with the utilization of water power; A fatal accident in a knitting mill.

Spain.—*Boletín del Consejo Superior de Emigración. Madrid.*

October, 1915 (No. 77).—Report of the special investigation of conditions under which Spanish emigrants are employed in Brazil, 1912; Methods of reacquiring and recovering forfeited citizenship by Spanish subjects; Regulations relative to emigration and immigration; Combatting trachoma; Proceedings of the Superior council of emigration; Statistics of emigration; the Cuban monetary system.

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INDUSTRIAL PEACE IN AUSTRALIA THROUGH MINIMUM WAGE AND ARBITRATION.¹

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The new province is that of the relations between employers and employees. Is it possible for a civilized community so to regulate these relations as to make the bounds of the industrial chaos narrower, to add new territory to the domain of order and law? The war between the profit maker and the wage earner is always with us, and, although not so dramatic or catastrophic as the present war in Europe, it probably produces in the long run as much loss and suffering, not only to the actual combatants, but also to the public. Is there no remedy?

During a brief sojourn in the United States in the summer of 1914 I had the good fortune to meet many men and women of broad and generous outlook and of admirable public spirit. They were anxious to learn what I, as president of the Australian court of conciliation and arbitration, could tell them of Australian methods of dealing with labor questions. I propose now, on the invitation of the editor of this Review, to state briefly the present position, confining my survey to my own personal experience.

The Australian Federal constitution of 1900 gave to the Federal Parliament power to make laws with respect to "conciliation and arbitration for the prevention and settlement of industrial disputes extending beyond the limits of any one State."² Following the example of the United States Constitution, the constitution left all residuary powers of legislation to the States, and the theory generally

¹ Reprint of an article entitled "A new province for law and order, industrial peace through minimum wage and arbitration," in Harvard Law Review, November, 1915. The article is reproduced here through the courtesy of the Harvard Law Review Association.

² Sec. 51 (XXXV).

held at the time of our constitutional convention was that each State should be left to deal with its own labor conditions as it thought best. But an exception was made, after several discussions, in favor of labor disputes which pass beyond State boundaries and can not be effectually dealt with by the laws of any one or more States. Just as bush fires run through the artificial State lines, just as the rabbits ignore them in pursuit of food, so do, frequently, industrial disputes.

In pursuance of this power an act was passed December 15, 1904, constituting a court for conciliation, and where conciliation is found impracticable, arbitration. The arbitration is compulsory in the sense that an award, if made, binds the parties. The act makes a strike or a lockout an offense if the dispute is within the ambit of the act—if the dispute is one that extends beyond the limits of one State. In other words, the process of conciliation, with arbitration in the background, is substituted for the rude and barbarous processes of strike and lockout. Reason is to displace force; the might of the State is to enforce peace between industrial combatants as well as between other combatants, and all in the interest of the public.

Under the act the court consists of a president, who must be one of the justices of the high court of Australia. The high court is modeled on the Supreme Court of the United States, having often to decide whether acts are constitutional, but it is also a court of appeal from the supreme courts of the States. The first president of the court of conciliation was appointed February 10, 1905, and on his resignation in September, 1907, I was appointed as his successor.

The first task that I had to face was not, strictly speaking, conciliation or arbitration. The Federal Parliament imposed certain excise duties on agricultural implements manufactured, but it provided for the remission of the duties in the case of goods manufactured under conditions, as to the remuneration of labor, which the president of the court should certify to be "fair and reasonable."¹ The act gave no guidance as to the model or criterion by which fairness and reasonableness were to be determined. In dealing with the first employer who applied to me for a certificate, I came to the conclusion that the act was designed for the benefit of employees and that it was meant to secure for them something which they could not get by individual bargaining with their employers. If A let B have the use of his horse on the terms that B give the horse fair and reasonable treatment, B would have to give the horse proper food and water, shelter, and rest. I decided, therefore, to adopt a standard based on "the normal needs of the average employee regarded as a human being living in a civilized community." This was to be the primary

¹ Excise tariff, 1906.

test in ascertaining the minimum wage that would be treated as "fair and reasonable" in the case of unskilled laborers. At my suggestion many household budgets were stated in evidence, principally by housekeeping women of the laboring class, and, after selecting such of the budgets as were suitable for working out an average, I found that in Melbourne, the city concerned, the average necessary expenditure in 1907 on rent, food, and fuel in a laborer's household of about five persons was £1 12s. 5d. (about \$7.80, taking a dollar as equivalent to 4s. 2d.); but that, as these figures did not cover light, clothes, boots, furniture, utensils, rates, life insurance, savings, accident or benefit societies, loss of employment, union pay, books and newspapers, tram or train fares, sewing machine, mangle, school requisites, amusements and holidays, liquors, tobacco, sickness or death, religion or charity, I could not certify that any wages less than 42s. (\$10.22) per week for an unskilled laborer would be fair and reasonable. Then, in finding the wages which should be treated as fair and reasonable in the cases of the skilled employees, I relied mainly on the existing ratios found in the practice of employers. If, for instance, the sheet-iron worker got 8s. (\$1.95) per day when the laborer got 6s., the sheet-iron worker should get, at the least, 9s. (\$2.19) when the laborer's minimum was raised to 7s. (\$1.70).

In the case referred to, the employer did not raise before me the point that the act was invalid, but, having failed in his application for a certificate, he refused to pay the excise duty, and defended an action to recover the duty before the high court on the ground that the act was invalid; and he succeeded, by a majority of three justices to two, on the ground that the act was not really a taxation act at all, but an act to regulate labor conditions, and as such beyond the competence of the Federal Parliament.¹ But the principles adopted in the case for ascertaining a "fair and reasonable" minimum wage have survived and are substantially accepted, I believe universally, in the industrial life of Australia.

In the first true arbitration case—that relating to ship's cooks, bakers, etc.—the standard of 7s. (\$1.70) per day was attacked by employers, but I do not think that it has been attacked since, probably because the cost of living has been rising. The court announced that it would ascertain first the necessary living wage for the unskilled laborer, and then the secondary wage due to skill or other exceptional qualifications necessary. Treating marriage as the usual fate of adult men, a wage which does not allow of the matrimonial condition and the maintenance of about five persons in a home would not be treated as a living wage. As for the secondary wage, it seemed to be the safest course, for an arbitrator not initiated into the mysteries

¹ *King v. Barger, Commonwealth v. McKay*, 6 Com. Law Rep., 41 (1908).

of the several crafts, to follow the distinctions in grade between employees as expressed in wages for many years.

The distinction between the basic or primary or living wage and the secondary wage attributable to exceptional qualifications necessary for the performance of the function is not fanciful; it was forced on the court by the problems presented and by the facts of industrial life. Yet it has to be borne in mind that though the essential natural needs come first, the conventional needs (e. g., of artisans as distinguished from laborers) become, by usage, almost equally imperative.¹

The following propositions may, I think, be taken to be established in the settlement of minimum wages by the court; and it is surprising to find how often, as the principles of the court's action come to be understood and appreciated, they guide parties disputing to friendly collective agreements, without any award made by the court.

1. One can not conceive of industrial peace unless the employee has secured to him wages sufficient for the essentials of human existence.²

2. This, the basic wage, must secure to the employee enough wherewith to renew his strength and to maintain his home from day to day.³

3. The basic wage is the same for the employee with no family as for the employee with a large family. It rests on Walt Whitman's "divine average," and the employer need not concern himself with his employee's domestic affairs.

4. The secondary wage is remuneration for any exceptional gifts or qualifications,⁴ not of the individual employee, but gifts or qualifications necessary for the performance of the functions, e. g., skill as a tradesman, exceptional heart and physique, as in the case of a gas stoker,⁵ exceptional muscular training and power, as in the case of a shearers,⁶ exceptional responsibility, e. g., for human life, as in the case of winding or locomotive engine drivers.⁷

5. The secondary wage, as far as possible, preserves the old margin between the unskilled laborer and the employee of the skilled or exceptional class.⁸

6. After ascertaining the proper wages, basic and secondary, the court considers any evidence adduced to show that the employers ought not to be asked to pay such wages.⁹ It will consider grounds of finance, of competition with imports, of unfairness to other workers, of undue increase in prices of the product, of injury to the public, etc.

¹ Engine drivers, 7 Com. Arb., 132, 139 (1913).

² Boot factories, 4 Com. Arb., 1, 10 (1910); Seamen, 5 Com. Arb., 147, 164 (1911).

³ Broken Hill Mine, 3 Com. Arb., 1, 20 (1909).

⁴ Boot factories, 4 Com. Arb., 1, 10 (1910); Postal electricians, 7 Com. Arb., 5, 10 (1913); Builders' laborers, 7 Com. Arb., 210, 217 (1913).

⁵ Gas employees, 7 Com. Arb., 58, 71 (1913).

⁶ Shearers, 5 Com. Arb., 48, 79 (1911).

⁷ Engine drivers, 5 Com. Arb., 9, 21 (1911).

⁸ McKay, 2 Com. Arb., 1, 16 (1907); Ship's cooks, 2 Com. Arb., 55, 65, 66 (1908).

⁹ Broken Hill Mine, 3 Com. Arb., 1, 31 (1909).

7. The wages can not be allowed to depend on the profits made by the individual employer, but the profits of which the industry is capable may be taken into account. If the industry is novel, and those who undertake it have to proceed economically, there may be a good cause for keeping down wages, but not below the basic wage, which must be sacrosanct. Above the basic wage, bargaining of the skilled employee may, with caution, be allowed to operate.¹

8. The fact that a mine is becoming exhausted or poorer in its ores is not a ground for prescribing a lower rate than would otherwise be proper. If shareholders are willing to stake their own money on a speculation, they should not take part of the employee's proper wages also. The court can not endanger industrial peace in order to keep unprofitable mines going.²

9. The court does not increase the minimum on the ground of affluence of the employer. It is not affected by the fact that one of the employers can, by skillful management, by enterprise, or by good fortune, make very large profits.³

10. The minimum rate must be based on the highest function that the employee may be called on to exercise. The employer must not give a plumber laborer's work and pay him laborer's wages if he has also to do plumbing.⁴

11. In finding the proper minimum rate the court tries to find what would be proper for an employee of average capacity called upon to do work of the class required. If the employer desires to secure the services of an exceptional workman, he is free to do so. The payment of higher rates is left to the play of bargaining.⁵

12. The court does not attempt to discriminate in wages on the ground of comparative laboriousness. Discrimination on such a ground is neither safe nor sound. The court declines to give an extra rate to hod men if they carry beyond a certain height.⁶

13. The court will not discriminate in wages as between the several States so as to interfere with the freedom of trade between the States provided by the constitution.⁷

14. The court will not keep down wages on steamers so as to enable them to beat State railways in competition or to help one competitor against another.⁸

¹ Broken Hill Mine, 3 Com. Arb., 1, 32 (1909); Shearers, 5 Com. Arb., 48, 73 (1911); Ship's officers, 6 Com. Arb., 6, 21 (1912).

² Broken Hill Mine, *supra*, 33 and 34; Engine drivers, 7 Com. Arb., 132, 139 (1913).

³ Seamen, 5 Com. Arb., 147, 164 (1911); Gas employees, 7 Com. Arb., 58, 72 (1913).

⁴ Postal electricians, 7 Com. Arb., 5, 8, and 9 (1913).

⁵ Ship's stewards, 4 Com. Arb., 61, 63, 68 (1910); Engine drivers, 5 Com. Arb., 9, 15 (1911); Shearers, 5 Com. Arb., 48, 91 (1911); Builders' laborers, 7 Com. Arb., 210, 223 (1913).

⁶ Builders' laborers', 7 Com. Arb., 231.

⁷ Constitution, sec. 92; Boot factories, 4 Com. Arb., 1, 13 (1910).

⁸ Ship's officers, 6 Com. Arb., 6, 22 (1912).

15. The court accepts and follows the usual practice of making rates for casual employment higher than the corresponding rates for continuous employment.¹

16. The court, in obedience to the act, provides exceptions to the minimum rate in the case of aged, slow, or infirm workers, but the exceptional cases must be disclosed to the representative of the union and be well safeguarded.²

17. But the court will not provide exceptions to the minimum rate for "improvers," men paid more than boys and less than journeymen, men who are used to beat down the claims of competent journeymen, and are thus a perpetual menace to the peace of the community.³

18. The court regards the old system of apprenticeship as unsuitable for factories under modern conditions, and it objects to fixing a rigid proportion of apprentices to journeymen without regard to the circumstances, e. g., the character of the output of each factory. But if conditions of apprenticeship are in dispute, the court will, especially if both sides wish it, and for the sake of peace as well as efficiency, make regulations on the subject. The proper method, however, seems to be, in boot factories, to coordinate the work of the factories with the work of the technical schools.⁴

19. The court will not prescribe extra wages to compensate for unnecessary risks to the life or health of the employee or unnecessary dirt. No employer is entitled to purchase by wages the right to endanger life or to treat men as pigs.⁵

20. The court gives weight to existing conventions, usages, prejudices, exceptional obligations and expenses of the employees; for instance, that masters and officers are required to keep up a certain appearance, and that stewards must provide themselves with uniform and laundry.⁶

21. Where it is established that there is a marked difference in the cost of living between one locality and another, the difference will, so far as possible, be reflected in the minimum wage.⁷

22. But where, as in the case of the wharf laborers at ports, all the employees and nearly all the employers desired that there should be no differentiation, the court bases the minimum wage on the mean Australian cost of living.⁸

¹ Builders' laborers, 7 Com. Arb., 210, 218 (1913).

² Act, sec. 40; Boot factories, 4 Com. Arb., 1, 24 (1910).

³ Ibid., 16.

⁴ Boot factories, 4 Com. Arb., 1, 19, 20 (1910).

⁵ Ship's cooks, 2 Com. Arb., 55, 59, 60 (1908); Seamen, 5 Com. Arb., 147, 164 (1911).

⁶ Ship's officers, 4 Com. Arb., 89, 93, 95 (1910); Ship's stewards, 4 Com. Arb., 61, 66 (1910).

⁷ Broken Hill Mine, 3 Com. Arb., 1, 28-30 (1909); Engine drivers, 5 Com. Arb., 9, 23 (1911); 7 Com. Arb., 132, 141 (1913); Fruit growers, 6 Com. Arb., 61, 69 (1912); Gas employees, 7 Com. Arb., 58, 70-74 (1913); Builders' laborers, 7 Com. Arb., 210, 221 (1913).

⁸ Wharf laborers, 8 Com. Arb., (1914).

23. In cases such as that of ship's stewards, where the employees usually receive from passengers "tips" (or "bunce"), the average amount of the tips must be taken into account in finding whether the employee receives a living wage. But the minimum wage will be raised to its proper level if the practice of tipping can be stopped.¹

24. In cases where employees are "kept," found in food and shelter by the employer, the value of the "keep" is allowed in reduction of the wages awarded. At the time when the keep of single men, such as laborers, cost in lodgings, usually 15s. (\$3.65) per week, the court reduced the wages by 10s. (\$2.43) only. For the 15s. (\$3.65) at the family home would go further than it would go for board and lodging outside of the home; and the employer who feeds large numbers of men can buy the necessary commodities in large quantities and on advantageous terms. The 10s. (\$2.43) per week seemed to represent fairly the amount of expenditure of which the home was relieved by the absence of the man.²

25. The principle of the living wage has been applied to women, but with a difference, as women are not usually legally responsible for the maintenance of a family. A woman's minimum is based on the average cost of her own living to one who supports herself by her own exertions. A woman or girl with a comfortable home can not be left to underbid in wages other women or girls who are less fortunate.³

26. But in an occupation in which men as well as women are employed the minimum is based on a man's cost of living. If the occupation is that of a blacksmith, the minimum is a man's minimum. If the occupation is that of a milliner, the minimum is a woman's minimum; if the occupation is that of fruit picking, as both men and women are employed, the minimum must be a man's minimum.⁴

27. As regards hours of work, when disputed, the court usually adheres to the general Australian standard of 48 hours; generally 8½ hours on five days, 4½ hours on Saturday. But in exceptional cases the court has reduced the hours—in one case because of the nerve-racking character of the occupation;⁵ in another case, that of builders' laborers—because the men have to "follow their job," spending much of their own time in traveling.⁶

28. The court has conceded the eight-hour day at sea as well as in port, to deck hands on ships;⁷ to officers on ships,⁸ to marine engineers.⁹

¹ Ship's stewards, 4 Com. Arb., 61, 64 (1910).

² Ship's cooks, 2 Com. Arb., 55, 62 (1908); Ship's stewards, 4 Com. Arb., 61, 63 (1910).

³ Fruit growers, 6 Com. Arb., 61, 71 (1912).

⁴ Ibid., 72.

⁵ Postal electricians, 7 Com. Arb., 5, 15-16 (1913).

⁶ Builders' laborers, 7 Com. Arb., 210, 228, and 229 (1913).

⁷ Seamen, 5 Com. Arb., 147, 159, 160 (1911).

⁸ Ship's officers, 4 Com. Arb., 89, 99 (1910).

⁹ Marine engineers, 6 Com. Arb., 95, 107 (1912).

But there are sundry necessary exceptions, and the master retains the absolute right to call on any man in emergencies involving the safety of the ship; and for other purposes he may call on any man, paying extra rates for the overtime. The hours of navigating officers were sometimes shocking and involved danger to ship, cargo, and passengers.¹

29. In certain exceptional cases the court has granted a right to leave of absence for two or three weeks on full pay to employees after a certain length of continuous service; not, of course, to casual or temporary employees.²

30. The court refuses to dictate to employers what work they should carry on, or how, or what functionaries they should employ, or what functions for each employee, or what tests should be applied to candidates for employment.³

31. The court leaves every employer free to carry on the business on his own system, so long as he does not perpetuate industrial trouble or endanger industrial peace; free to choose his employees on their merits and according to his exigencies; free to make use of new machines, of improved methods, of financial advantages, of advantages of locality, of superior knowledge; free to put the utmost pressure on anything and everything except human life.⁴

32. As regards complaints of disagreeable or onerous conditions, the court treats as fundamental the consideration that the work of the ship, factory, mine, etc., must be done, a consideration next in order to that of the essential needs of human life. An order will not be made that is inconsistent with the effective management of the undertaking.⁵

33. On the same principle the court steadily refuses to make orders which would militate against the public interest or convenience. It has refused to order prohibitive overtime rates for leaving port on Sundays;⁶ it has refused to forbid the employment of casuals or to forbid "broken time" in tramway services. Casuals or "broken time," or both, are necessary to meet the extra traffic at certain times of the day.⁷

These are some of the principles of action adopted by the court. But, it may be asked, what about piecework? How does the court fix piecework rates? The first great case in which piecework rates were directly involved was that of the shearers.⁸ At the time of

¹ Ship's officers, 6 Com. Arb., 6, 16, 17 (1912).

² Ibid., 15, 25; 7 Com. Arb., 92, 104 (1913); Postal electricians, 7 Com. Arb., 5, 17 (1913).

³ Broken Hill Mine, 3 Com. Arb., 1, 36 (1909); Postal electricians, 7 Com. Arb., 5, 7, 8, 13, 18, 19 (1913).

⁴ Boot factories, 4 Com. Arb., 1, 18 (1910); Shearers, 5 Com. Arb., 48, 100 (1911); Fruit growers, 6 Com. Arb., 61, 75 (1912); Gas employees, 7 Com. Arb., 58, 77 (1913).

⁵ Ship's stewards, 4 Com. Arb., 61, 73 (1910); Ship's officers, 4 Com. Arb., 89, 101 (1910).

⁶ Seamen, 5 Com. Arb., 147, 160 (1911).

⁷ Tramways, 6 Com. Arb., 130, 144 (1912).

⁸ 5 Com. Arb., 48 (1911).

the arbitration, wool furnished nearly 40 per cent of the exports of Australia, nearly £29,000,000 (\$141,128,500) per annum, in addition to the wool used in Australia. In that case the court prescribed the piecework rates on a time-work basis—found the piecework rates which would enable an average shearer to earn such wages per week as would be the just minimum for a man with the qualifications of a shearer if he were paid by time. Having found that the shearer should, as a “skilled” worker get a net wage of £3 (\$14.60) per week for the time of his expedition to the sheep stations to shear, and having found that a rate of \$5.84 per 100 sheep would give this net result, the court fixed \$5.84 per 100 as the minimum rate.¹ In finding the net returns of the whole expedition, allowances had to be made for days of traveling and waiting, expenses en route, cost of mess and combs and cutters.² This system of finding the net result of the expedition, and what would be a fair return for the expedition, was also adopted in the case of persons employed by fruit growers on the River Murray.³ Sometimes the court protects pieceworkers in making their bargain by prescribing that their remuneration shall not fall below, in result, a certain time-work minimum.⁴

The system of arbitration adopted by the act is based on unionism. Indeed, without unions it is hard to conceive how arbitration could be worked. It is true that there are methods provided by which the court can intervene for the preservation of industrial peace even when its powers are not invoked by any union; but no party can file a plaint for the settlement of a dispute except an “organization,” that is to say, a union of employers or of employees registered under the act.⁵ One of the “chief objects” of the act, as stated in section 2, is “to facilitate and encourage the organization of representative bodies of employers and of employees and the submission of industrial disputes to the court by organizations;” and it follows that the court will not assist an employer in devices to stamp out unionism.⁶ It is, of course, better for an employer that he should not be worried by complaints of individual employees and that any complaints should be presented collectively by some responsible union. He has then the advantage of being able to deal with his employees on a consistent scheme, equitable all round the service, and his time is not taken up by petty complaints or individual fads. A demand made on him comes from a responsible executive, with the consent, direct or indirect, of the organized body of members of the union. Moreover from the point of view of the employees, it is better that an individual employee should not, by complaining, incur the risk of becoming a

¹ 5 Com. Arb., 73, 79 (1911).

² Ibid, 74, 76.

³ Fruit growers, 6 Com. Arb., 61, 68 (1912).

⁴ Ibid, 75.

⁵ Sec. 19.

⁶ Tramways, 6 Com. Arb., 130, 143 (1912).

marked man or of being removed, and the individual employee is generally powerless. From the point of view of the court and of the public, it is fair to state that in nearly every case—I can only remember one case to the contrary—the influence of union leaders has always been in the direction of peace. It would not be so probably if there were no means of obtaining an improvement of conditions except by strike, actual or threatened, but in Australia the leaders can hold out to the members of the union a prospect of relief, without strike, from the court or from some wages board.¹ It is significant that, in the one exceptional case referred to, the leaders of the union have been converted so that they are now strong advocates of arbitration.

But then comes the difficult question of "preference to unionists." Preference to unionists is the Australian analogue of the "preferential union shop," made familiar in some of the garment industries of the United States. The act gives the court power to direct that, as between members of organizations (unions) of employees and other persons desiring employment at the same time, preference shall be given to such members, other things being equal.² But it is only a power, not a duty, to order such preference, and the court is very loath to exercise the power. "The absolute power of choice (between applicants for employment) is one of the recommendations of the minimum-wage system from the employer's point of view—he can select the best men available when he has to pay a certain rate."³ For this reason preference was refused in the case of shearers, etc.,⁴ in the case of seamen,⁵ in the case of builders' laborers.⁶ Yet the court recognizes the difficulty of the position. As was said in the builders' laborers case:

The truth is, preference is sought for unionists in order to prevent preference of nonunionists or antiunionists—to prevent the gradual bleeding of unionism by the feeding of nonunionism. It is a weapon of defense. For instance, some employers here hired men through the Independent Workers' Federation—a body supported chiefly by employers' money and devised to frustrate the ordinary unions—and those who applied for work at the office of this body would not be introduced to the employer unless they ceased to be members of the ordinary unions and became members of this body. What is to be done to protect men in the exercise of their right as free men to combine for their mutual benefit, seeing that the employing class has the tremendous power of giving or withholding work? The only remedy that the act provides is an order for preference, and it is doubtful whether such an order is appropriate or effective. It is, indeed, very trying for men who pay full dues to a legitimate union to work side by side with men who do not—with men who look to their own interests only, seeking to curry favor with the employers, getting the benefit of any general rise in wages or betterment of conditions which is secured without their

¹ Marine engineers, 6 Com. Arb., 95, 100 (1912).

² Sec. 40.

³ Engine drivers, 5 Com. Arb., 9, 25 (1911); 7 Com. Arb., 132, 147 (1913); Tramways, 6 Com. Arb., 35, 47 (1912).

⁴ 5 Com. Arb., 48, 99 (1911).

⁵ 5 Com. Arb., 147, 170 (1911).

⁶ 7 Com. Arb., 210, 233 (1913).

aid and in the teeth of their opposition—men who are preferred (other things being equal) for vacancies and promotion. Every fair man recognizes the difficulty of the position—every man who is not too much of a partisan to look sometimes at the other side of the hedge. In another case recently before me, a nonunionist told me that he acted solely on the basis of his personal interest, without any regard for the interests of his fellow workers. He looked for favors to himself, because he kept away from those who combined for the common good of the whole body. It is not out of consideration for such men that I refuse preference; it is rather out of consideration for such employers as honestly take the best man available, unionist or not. I do not want them to be harassed with the doubt, when selecting men for a post, whether they can prove their appointee to be better than all the unionist applicants. I refuse preference, also, out of consideration for many who have not joined any union simply because they have not felt the need. In the case of country building work, for instance, it is common for men on farms, etc., when farm work is not pressing, to take a job as builders' laborer. Why should the employer be compelled to bring union laborers from the city? After all, the direct way for unionists to counteract unfair preference of nonunionists is for the unionists to excel—to give to the employer the best service. It is nearly always found that employers prefer a first-class man who is a unionist to a second-class man who is a nonunionist.¹

The only case in which the court has ordered preference is the case of a tramway company which deliberately discriminated against unionists and refused to undertake not to discriminate in future.² It is to be observed that the court is not given power by the act to order that the employer shall not discriminate against unionists in giving or withholding employment.

The imposition of a minimum wage, a wage below which an employer must not go in employing a worker of a given character, implies, of course, an admission of the truth of the doctrine of modern economists, of all schools I think, that freedom of contract is a misnomer as applied to the contract between an employer and an ordinary individual employee. The strategic position of the employer in a contest as to wages is much stronger than that of the individual employee. "The power of the employer to withhold bread is a much more effective weapon than the power of the employee to refuse to labor."³ Low wages are bad in the worker's eyes, but unemployment, with starvation in the background, is worse. The position was put luminously once, as well as with unconscious humor, by an employer on whom a plaint was served for settlement of a dispute by the court. In place of filing an answer he wrote a letter to the registrar, denying that he was a party to any dispute. "I have never," said he, "quarreled or disputed with a laborer of any kind. * * * If we can not agree, well, we will part; that ends the whole. * * * Love is the power which will end all struggles, not legislation." Other respondents pin their faith, not to "love," but to the sterner "law of supply and demand."

¹ 7 Com. Arb., 210, 233, and 234 (1913).

² Tramways, 6 Com. Arb., 130, 162 (1912).

³ Engine drivers, 5 Com. Arb., 9, 27 (1911).

They treat this law as being, in the matter of wages, more inexorable and inevitable than even the law of gravitation, as not being subject, as laws of nature are, to counteraction, to control, to direction. "One may dam up a river, or even change its course, but one can not (it is said) raise wages above the level of its unregulated price, above the level of a sum which a man will accept rather than be starved."¹ If the court did nothing else than drag such theories into the light of day and into free discussion it would be doing good service to the community. But it is coming to be recognized that what the court does in fixing a minimum wage is by no means novel in principle. There are many acts of many legislatures which prescribe minimum conditions on other subjects. For example, mining acts often prescribe minimum conditions as to ventilation, timbering, safety appliances, machinery, sanitation. These matters are not left to individual bargaining.

There are no definite figures with regard to the cost to the parties of arbitration proceedings, but the cost is very slight. There are seldom any costs incurred in employing lawyers, for, under section 27 of the act, lawyers can not be employed except with the consent of both parties, and the employees generally refuse their consent. The secretary of the organization generally puts its case, and the employees or some permanent officer generally put the employers' case. The principal expense of an arbitration is that of bringing witnesses. If prohibition proceedings are taken in the high court to prevent the enforcement of an award on the ground that the court of conciliation has exceeded its jurisdiction (of which I shall say more presently), no doubt heavy, very heavy, expenses are incurred, but these are not expenses of the arbitration.

But it has to be admitted that proceedings in the court of conciliation often take a very long time, sometimes weeks; in a few cases, months. The proceedings can not be otherwise than lengthy, as the disputes of which the court can take cognizance are so widespread—must extend from one State into one or more other States. Moreover, the habit is to bring before the employers, and afterwards before the court, a very long list of conditions in dispute, and the case of each employer has to be fairly considered by the court in connection with each grievance. The number of employers' respondents to a plaint is generally great. There were 311 employers in the engine drivers' case,² 570 in the case of the builders' laborers,³ 650 in that of the fruit growers,⁴ and 2,549, at least, in that of the shearers.⁵

¹ Engine drivers, 5 Com. Arb., 27, 28 (1911); Ship's officers, 6 Com. Arb., 6, 18 (1912); Marine engineers, 6 Com. Arb., 95, 101 (1912).

² 7 Com. Arb., 132 (1913).

³ 7 Com. Arb., 210 (1913).

⁴ 6 Com. Arb., 61, 65 (1912).

⁵ 5 Com. Arb., 48, 65 (1911).

The court has no power to make an award a common rule of the industry; it can not investigate and settle the proper conditions to be applied in one typical undertaking and then extend the same conditions to other undertakings of the same character. The act purported to give this power to the court, but it was held by the high court, on a case stated, that the act was in this respect unconstitutional and invalid.¹ This want of power to make a common rule for the industry not only lengthens the proceedings, but it also may operate to the prejudice of the employers who are bound by the award. For the court can deal only with employers who employ members of the union. Some rival employers may have no members of the union in their employment and therefore have to be excluded from the award. Their hands are free as to wages, while the hands of the others are fettered, and this is, of course, unfair as between competitors in the trade. In one case, that of the boot factories,² the difficulty was met by the employers and employees concurring in an application before the wages boards of each of the States concerned to have the terms of the award made a common rule for the State. But this remedy is not always available.

There is a provision in the act³ enabling the court to appoint a board of reference, assigning to it the function of determining specified matters which under the award may require to be determined. Such a provision, if properly drafted and valid, would be of eminent service to peace. Difficulties often arise under an award, owing to the vast variety of methods in the different undertakings, as to the application of the words of the award to some particular case. These and other difficulties ought to be met by collective adjustment, between representatives of the employers on the one side and the representatives of the union on the other, with a neutral chairman; but from the nature of the case there would have to be a separate board in each of the centers of the industry. Nothing would tend more to prevent serious friction and to promote mutual understanding of employers and employees. "A suitable board of reference, under the ægis of a strong union, is a safety valve for any industry."⁴ But, unfortunately, as the section stands, with the interpretation put upon it by the high court, it is practically useless. The parties on both sides of a dispute often seek a board, or rather boards, of reference,⁵ but the court can not generally help them. Sometimes, however, the parties to the dispute make and file agreements between the union and the several employers for a board and leave the court to award on the other subjects in dispute, and the agreements are certified by the

¹ Boot factories, 11 Com. Law Rep., 311 (1910).

² 4 Com. Arb., 1 (1910); Builders' Laborers, 7 Com. Arb., 210, 235 (1913).

³ Sec. 40a.

⁴ Engine drivers, 7 Com. Arb., 132, 144 (1913).

⁵ Seamen, 6 Com. Arb., 50 (1912).

court, and on being filed under section 24 have the same binding effect as an award.¹

There are two important powers of which the court has frequently availed itself, or threatened to avail itself, with very excellent effect.² These are: (a) The power to withhold an award if it appear "that further proceedings by the court are not desirable in the public interest;"³ and (b) the power to vary an award.⁴ Sometimes the employees, though seeking an award, have taken up an obstinate attitude, intimating in effect that if the award does not meet their wishes they will not abide by it, and the court has plainly intimated that it will not proceed with the arbitration on such terms.⁵ It can not be for the public interest to proceed with the arbitration under such a constraint. Arbitration by the court is meant to be a substitute for the method of strike, and "you can not have award and strike too."⁶ In one case, while the court was preparing an award for seamen and firemen, information came that the firemen of the steamship *Koombana* refused to work on the ship unless a certain chief steward were removed. The position was serious; the ship carried the mails, as well as passengers and cargo, for ports on the west Australian coast. There was an agreement in existence under which it was a breach of agreement on the part of the union if by reason of any dispute a vessel were detained 24 hours. The court intimated that it would not make its award so long as the agreement was not observed. As a result, officials of the union conducted suitable firemen to the port where the vessel lay, put them on board, and the *Koombana* went on its way; then, and not till then, the court gave its award.⁷

The power to vary an award has also been held over the head of a recalcitrant union. It is not fair to keep the employers bound by the award if the union takes the benefit of the award and rejects the burden. The court has power to lower or annul the minimum wage in such a case if necessary.² Fortunately it never has been necessary. I may give one case in point. The wharf laborers were on strike in Brisbane; seamen who were enjoying the benefit of an award were ordered to unload their vessel. They were naturally indisposed to comply, but, before refusing, they telegraphed to the executive of their union for directions. They were told by the executive to unload or they would lose the award. They unloaded.

Another very valuable power is that conferred by Parliament in 1910, under which the president may, when a dispute exists or is

¹ Engine drivers, 7 Com. Arb., 132, 135 (1913).

² Fruit growers, 6 Com. Arb., 61, 78 (1912).

³ Sec. 38A.

⁴ Sec. 38o.

⁵ Gas employees, 7 Com. Arb., 58, 62 (1913); Broken Hill Mine, 3 Com. Arb., 1, 20 (1909).

⁶ Liquor trade, 7 Com. Arb., 255 (1913).

⁷ Seamen, 5 Com. Arb., 147, 173-174 (1911).

threatened, summon any person to attend a conference in his presence. The attendance is compulsory, enforceable by penalty.¹ Frequently a quiet talk at such a conference has prevented a strike which was imminent.² Frequently the parties arrange to proceed for arbitration and make temporary arrangements for carrying on work until the award.³ Sometimes an actual strike confined to one State though the dispute extended to two States, has been stopped, the men going back to work at the old rates until the award.⁴ A further amendment was made in the act in 1911, under which, if no agreement has been reached at the conference, the president can refer the dispute into the court for arbitration.⁵ The fact that this whip is in the hands of the president, to be used in the last resort, and that the party with the stronger position for the time being will have to submit to an award if he takes up an obstinate attitude against all agreement, is found to operate as a strong inducement to compromise and to reasonable arrangements by consent. Agreements in lieu of award have often been fixed up in a conference or as the result of a conference.⁶ The agreements are generally produced in court when the case is called on, and the president certifies to them, and has them filed, and they operate, are enforceable, as an award.⁷ In one long case, where the court was faced with a dispute in 10 tramway undertakings, no less than 8 of the undertakings arranged agreements during the course of the long hearing, with the assistance of the president given in frequent interviews with the parties in chambers.⁸

It must not be supposed that the desire for the assistance of the president or of the court is confined to employees. At first there was a tendency on the part of employers, individually, and in association, to resent interference, as preventing the employers from carrying on, as they said, their own business in their own way. But facts have been too strong for them. Employers now frequently request the president to intervene and to summon a conference in order to prevent a stoppage of work.⁹ They seek regulation, by agreement or award, in order that they may not find their plant lying idle and their business at a standstill and in some cases a season lost.

¹ Sec. 16a.

² Seamen, 4 Com. Arb., 108 (1910); 5 Com. Arb., 147, 154 (1911); Fruit growers, 5 Com. Arb., 37, 183 (1911); 6 Com. Arb., 61, 62 (1912); Steamboat enginemen, 6 Com. Arb., 60 (1912); Bakers, 7 Com. Arb., 257-8 (1913).

³ Export butchers, 4 Com. Arb., 82, 87 (1910); Glass-bottle makers, 6 Com. Arb., 176 (1912); Steamboat Enginemen, 7 Com. Arb., 37 (1913); Bakers, 7 Com. Arb., 257-8 (1913).

⁴ Export butchers, 7 Com. Arb., 52-54 (1913).

⁵ Sec. 19d.

⁶ Engine drivers, 6 Com. Arb., 126 (1912); Glass-bottle makers, 6 Com. Arb., 176 (1912); 7 Com. Arb., (1913); Seamen (as to manning), 7 Com. Arb., 2 (1913); Journalists, 7 Com. Arb., 112, 113 (1913); Liquor trade, 6 Com. Arb., 129 (1912); 7 Com. Arb., 254 (1913).

⁷ Sec. 24.

⁸ Tramways, 6 Com. Arb., 130, 140 (1912); and see Journalists, 7 Com. Arb., 112, 113 (1913).

⁹ Seamen, 4 Com. Arb., 108 (1910); 5 Com. Arb., 147, 154 (1911); Fruit growers, 5 Com. Arb., 37 (1911); Waterside workers, 6 Com. Arb., 3 (1912); Glass-bottle makers, 6 Com. Arb., 176 (1912); Liquor trade, 7 Com. Arb., 254 (1913); Export butchers, 7 Com. Arb., 52 (1913); Victorian Stevedoring Co., 5 Com. Arb., 1 (1911).

Perhaps it will be well to give a concrete case. There is in Victoria a great butchering trade in lambs for export, involving, I believe, more than a million pounds per annum. The lambs are sent down to Melbourne in the spring, September or October, and unless they are butchered at once they deteriorate in condition and the season is lost. The men suddenly refused to go to work at the old rates; telegrams flew up to the country settlements to stop trucking any more lambs; the settlers were faced with the prospect of losing their market, and the storekeeping and incidental industries with the prospect of grievous loss. It so happened that the same demand was made on employers in New South Wales, so that there seemed to be a two-State dispute which gave jurisdiction to the president. A conference was summoned at the request of the employers, the men induced to go to work under the conditions already in operation on a promise that the court would arbitrate and make the award retrospective to the resumption of work, and the season was saved.¹ The parties prepared themselves peacefully to discuss their differences before the court, but—this is the point—the work went on.

Another concrete case, showing the desire of both sides for definite regulation of conditions by the court, is that of the ship's officers. The men, in their demands, had been too specific; the high court had decided that the dispute must be treated as confined to the specific demands made, and that the court of conciliation could not prescribe a remedy for any grievance different from that remedy demanded. The court of conciliation found that the granting of the demands, as asked, would tend to promote strife rather than peace in the industry, and stated its difficulties to the parties. Both parties were so anxious for a definite arrangement of conditions that they consented to embody in an agreement any terms whatever that the president thought proper, whatever the ambit of the dispute, whatever the jurisdiction of the court. The president accordingly continued the hearing of the case and drew up an agreement which both parties signed and which they have both loyally observed.²

There is such a strong desire for the assistance of the machinery of the act that on several occasions an attempt has been made by employers, with or without the concurrence of employees, to induce the president to intervene in cases in which he has had to refuse his assistance, on the ground that the dispute does not extend beyond one State and must be dealt with, if at all, by State authorities.³ Quite recently the president has had, however, to make an exception to his rule not to meddle, even by consent, with matters outside his jurisdiction. There was a dispute between laborers and

¹ Export butchers, 7 Com. Arb., 52, 54 (1913).

² Ship's officers, 4 Com. Arb., 89, 91 (1910); Hairdressers, 6 Com. Arb., 1 (1912).

³ Victorian Stevedoring Co., 5 Com. Arb., 1 (1911).

artisans on the one side and the Commonwealth Government on the other, as to conditions of labor in the construction of a naval base in Western Port, Victoria; all parties signed a submission to arbitration, leaving everything to the determination of the president as in a voluntary arbitration. In view of the serious effects of a stoppage of the works in time of war, the president consented to act, heard the parties, and gave an award, and the parties are peacefully acting in accordance with it.¹

But the course of the court, like the course of true love, does not always run smooth. It has to meet some bitter opposition. Sometimes the opposition comes from a union of employees—generally, a union which avowedly accepts the doctrine of the “class war,” and aims at “the emancipation of labor by the abolition of the wage system.”² I have even seen a cartoon, in a labor newspaper, showing a laborer walking toward a gate marked “Freedom,” and a bull dog with a collar marked “Arbitration” bars his path. It is but fair to say that this cartoon appeared in a State which has a local arbitration court. But the attacks on the court and its awards are, of course, generally made from the side of employers, many of whom naturally resent any curtailment of their powers. The applications for prohibition against the president have been sometimes in part or temporarily successful. Prohibition is applied for because of some alleged excess of the court’s jurisdiction, and the argument generally turns on the questions, Was there a dispute, and if there was, did it extend beyond one State? Sometimes the argument turns on the validity of some section of the act. The proceedings are very long and very costly, and it is astonishing what a wealth of learning is involved in the meaning of the word “dispute” and the words “extending beyond the limit of any one State.” The discussions occupy a very considerable proportion of the Commonwealth Law Reports, but they would not interest those for whose information I write this article. The legal discussions do not affect the principles or methods of action of the court of conciliation in cases where there is jurisdiction.

It has to be admitted that the awards in nearly all cases have been made in a period when the cost of living is rising and that therefore they have generally increased the existing minimum rate. The court found, about 1911, that the cost of living was substantially increasing, but it refused to raise the basic wage until the increase could be quantitatively stated.³ It suggested the expediency of official statistics on the subject, and the Commonwealth statistician now furnishes periodically statistics which have mate-

¹ Naval base—not reported

² Fruit growers, 6 Com. Arb., 61, 65, 78 (1912).

³ Engine drivers, 5 Com. Arb., 9, 14, 16 (1911).

rially assisted the court. According to the Commonwealth statistician, the cost of living, taking Australia as a whole, has increased by 25 per cent from 1901 to 1913. For such necessities as could be bought in 1901 for \$4.87 one must now pay \$6.08.¹ What will happen if the cost of living should decrease—if the minimum for the basic or living wage shall have to be lowered? It is a fair question, but it is for the future to give the answer. I wish to confine my words to my personal experience. Yet there have been cases in which the court has refused increases or has actually decreased the minimum rates, and the employees have listened to the reasons and loyally submitted. In the case of the shearers,² the rates for shearing, \$5.84 per 100, as fixed by my predecessor, were not increased; and the strongest union in Australia, the Australian Workers' Union, acquiesced. In the same case the court found that too high minimum rates had previously been fixed for wool pressers and lowered them, stating its reasons. There was no strike, no refusal to work, no expression, that I know, of discontent. In the case of the builders' laborers,³ the court fixed lower rates for Ballarat and Bendigo than for Melbourne and lower rates for Melbourne than for Sydney, all because of differences in the cost of living. The union leaders were troubled because these cities had always maintained the same "union rate"; but they told the members of the union the court's reason, and there was peace. Again, in the same case, the court fixed for Melbourne a lower minimum rate for scaffolders and demolishers than had been previously fixed by the wages board, 31 cents per hour instead of 33 cents per hour, and the men submitted. The truth is, I think, that if the men secure the essentials of food, shelter, clothing, etc., they are not so unreasonable as is sometimes supposed. They do not love strikes for the sake of strikes; and the great majority are generally quite willing to submit to reason if they feel that they are reasonably treated.

This article is confined, as I stated at the beginning, to the Federal court of conciliation and to my own actual experience in connection therewith. But American readers should know that in each of the six Australian States there is some wages board system under the State law or some industrial or arbitration court. Victoria was the first State to adopt a system of wages boards, about 1896; and her example has been more or less followed in Queensland, South Australia, and Tasmania. Western Australia has an arbitration court, and New South Wales has a combination of the two systems, wages board and an industrial court. There is no organic connection between the State systems and the Federal system. The object of the wages boards is primarily to prevent sweating or underpayment; the

¹ Postal electricians, 7 Com. Arb., 5, 12 (1913).

² Builders' laborers, 7 Com. Arb., 210 (1913).

³ Shearers, 5 Com. Arb., 48 (1911).

object of the Federal court is to preserve or restore industrial peace. The Federal court deals with disputes, as such, and prescribes wages, etc., merely as incidental to the prevention or settlement of disputes; the wages board prescribes minimum wages and has no direct relation to disputes. But, as is obvious from the nature of the case, the systems often overlap. A wages board consists, generally, of representatives selected by employers and of representatives selected by employees in equal numbers, with a neutral chairman. There is not, I think, any fixed principle stated by the legislatures for the guidance of the boards in prescribing the minimum wage. At one time, the Victorian legislature enacted that the minimum wage should not exceed the wage paid by "reputable employers;" but this negative provision has been found unsuitable, and repealed. The wages boards can not deal with all industrial conditions; the Federal court can deal with any industrial condition that comes into dispute. The wages boards do not publish the reasons for their determinations; the Federal court does. As a result I find that the wages boards frequently look for guidance in their action to the reasoning of the Federal court. The wages boards, within the limits of area assigned to them, bind all employers by their determinations; the Federal court can only bind those who are concerned in the dispute. The wages boards, being State creations, are very much affected by the consideration of interstate competition.¹ In dealing with boot factories, the New South Wales tribunal would have fixed the minimum for journeymen at \$2.19 per day, but for the fact that the rival factories of Victoria had a minimum of \$1.95 per day. The Federal court, when asked to intervene, was able, as an Australian tribunal, to bind the employers of both States to pay the \$2.19 per day.²

Another weakness in the wages board system is that employees, in the presence of an employer or a possible employer, have not the independent position which would enable them to act fearlessly. This is especially the case where, as in the case of city tramways, there is only one undertaking where a tramway man can get employment. In the case of the Brisbane tramways it appeared that it was the manager who, as a member of the wages board, made all the proposals, and that every one of his proposals was carried unanimously.³ Again, the decision of the wages board of one State is frequently inconsistent with the decision of the wages board of an adjoining State. There is no one final coordinating authority as in the case of the Federal court, and the result is often that contrasts appear, and dissatisfaction arises, and industrial trouble. For instance, a large mining dis-

¹ Engine drivers, 5 Com. Arb., 9, 17 (1911).

² Boot factories, 4 Com. Arb., 1, 8 (1910).

³ Tramways, 6 Com. Arb., 130, 149 (1912).

trict, of essentially the same physical and industrial character, with the same cost of living, is divided by the artificial boundary line between two States. The wages board of one State prescribed one set of wages and conditions, the wages board of the other State prescribed a lower set. The consequences were disastrous.¹ A New South Wales wages board gave in the case of builders' laborers,² the lowest rate to scaffolders, and the highest to hod men. The Victorian wages board gave the highest rate to scaffolders. The New South Wales board gave a low rate to demolishers; the Victorian board gave the highest rate. The Federal court, when it came to act, prescribed a flat minimum rate for all the laborers, and the employees were satisfied. They knew that a man of exceptional value as a scaffolder or in any other capacity would still be able to demand and obtain a rate higher than the minimum. It is often said that the minimum rate tends to become the maximum, but there has been no proof of such tendency as yet. Moreover, the wages boards are often not suitably grouped, and there is a tendency to ignore the interests of unrepresented minorities, of employers as well as of employees. For example, there was in Victoria a "Hay, chaff, wood, and coal board," composed, as to employers, of ordinary wood, coal, and produce retailers. They managed to get a determination which kept their own yardmen at low wages, but fixed a disproportionately large minimum for yardmen who handled coke, because the gas company of the city was practically the only vender of coke and it was not represented on the board.³ But most of these defects, and other defects which I could point out, are not of the essence of the system and will probably be removed or obviated in the light of experience. Employers have assured me that they welcome the fixing of minimum rates by the boards or by the court. They know now definitely what they must pay, and, so long as they pay it they feel no more the incessant nagging of unions or employees as to wages. Nor can any impartial person deny the immense relief which the system of wages boards has afforded to thousands of the most helpless families throughout Australia. Wages boards constitute one of the most useful factors of those which tend in the words of Russell Lowell, to "lift up the manhood of the poor" and to provide proper sustenance and upbringing for the children of the nation.

Perhaps I should add here that up to the present I have not been able to trace any increase of price of commodities to the fixing of minimum wages. It is not the function of the court to ascertain the truth as to the causes of increased prices, but the court watches

¹ Engine drivers, 7 Com. Arb., 132, 145 (1913).

² Builders' laborers, 7 Com. Arb., 210 (1913).

³ Gas employees, 7 Com. Arb., 58, 65 (1913).

for any sidelights on this important subject. In one case, I believe, a wages board raised the wages of milk carters by 24.33 cents per day and the milk vendors at once raised the price of milk by 2.03 cents per quart. For 100 quarts per day, this would mean an increase of receipts to the amount of \$2.03 per day, so that the milk vendors had raised the price of milk far beyond the amount necessary to recoup them for the additional wages.

It will be asked, however, what is the net result of the court of conciliation? Have strikes ceased in Australia? The answer must be that they have not. There have been numerous strikes in Australia, as elsewhere. But since the act came into operation there has been no strike extending "beyond the limits of any one State." Those who are old enough to recall the terrible shearers' strike and seamen's strike of the "nineties," with their attendant losses and privations, turbulence and violence, will realize how much ground has been gained. The strikes which still occur within a single State, and disputes within a single State are outside the jurisdiction of the court. It can be safely said that, since the act, every dispute "extending beyond the limits of any one State" comes before the court or the president, either on the application of parties to the dispute, or on the initiative of the officers of the court.¹ Moreover, with the exception of one doubtful case, in which I was not personally concerned and do not know the full particulars, there has been no instance of an award being flouted by the employees, no instance of the employees refusing to work under an award. There have been cases in which parties have differed in the interpretation of an award in its application to exceptional circumstances; there have been instances of inadvertent disobedience, and these cases have sometimes come to the courts in the form of an action for a penalty. But these were cases in which the award was treated as regulating the rights of the parties, not treated as a thing to be rejected.

In 1911, Parliament intrusted to the court another formidable function, the settling of wages, hours, and conditions of labor for Federal public servants. This function does not rest on the constitutional power to make laws for conciliation and arbitration in industrial disputes;² it rests on the absolute power of the Commonwealth in relation to its own servants. The public servants are allowed to group themselves in unions, "organizations," as they think fit, and to approach the court with a plaint. It seems at first sight curious that Parliament should intrust any tribunal with a power of adjudicating on such subjects, but Parliament has been careful to retain the final control of the Commonwealth finances. For the award does not come into operation till the expiration of 30

¹ Sec. 19.

² Sec. 51 (XXXV).

days after it has been laid before both houses, and Parliament can, if it sees fit, pass a resolution disapproving of the award. This remarkable jurisdiction over public servants deserves a study all to itself, and I can only say, though there have been several important awards under it no award has yet met with the disapprobation of Parliament and no resolution of disapproval has even been tabled.

In conclusion, I may state that I am not unaware of the far-reaching schemes, much discussed everywhere, which contemplate conditions of society in which the adjustment of labor conditions between profit makers and wage earners may become unnecessary. Our Australian court has nothing to do with these schemes. It has to shape its conclusions on the solid anvil of existing industrial facts, in the fulfillment of definite official responsibilities. It has the advantage, as well as the disadvantage, of being limited in its powers and its objects. Its objective is industrial peace, as between those who do the work and those who direct it. It has no duty, it has no right to favor or to condemn any theories of social reconstruction. It neither hinders nor helps them. But it is obvious that even if all industries were to be carried on under State direction, industrial peace would be as vitally important as it is now; and that it could not be secured without recognition of the principle which the court has adopted, that each worker must have, at the least, his essential human needs satisfied, and that among the human needs there must be included the needs of the family. Sobriety, health, efficiency, the proper rearing of the young, morality, humanity, all depend greatly on family life, and family life can not be maintained without suitable economic conditions. The reasoning which has lately committed to the court the function of settling conditions of labor for public servants would not be less, would be even more applicable, if the State had more servants than it has.

Yet, though the functions of the court are definite and limited, there is opened up for idealists a very wide horizon, with, perhaps, something of the glow of a sunrise. Men accept the doom, the blessing of work; they do not dispute the necessity of the struggle with nature for existence. They are willing enough to work, but even good work does not necessarily insure a proper human subsistence, and when they protest against this condition of things they are told that their aims are too "materialistic." Give them relief from their materialistic anxiety; give them reasonable certainty that their essential material needs will be met by honest work, and you release infinite stores of human energy for higher efforts, for nobler ideals, when "Body gets its sop, and holds its noise, and leaves soul free a little."

DEPARTMENT OF LABOR CONFERENCE ON EMPLOYMENT HELD AT CHARLESTON, S. C., DECEMBER 16-17, 1915.

In order to make more effective and widespread the services of the division of information in the Bureau of Immigration, the Department of Labor has held two conferences on employment with officials of various States and municipalities engaged in placing the unemployed in positions. The first conference of this kind was held at San Francisco, Cal., August 2-16, 1915, the proceedings of which were reported in the October issue of the MONTHLY REVIEW. The second conference was held at Charleston, S. C., on December 16-17, 1915, on the occasion of the meeting of a southern commercial congress at that place. It aimed to bring the executive officers of the Department of Labor intrusted with the distribution of labor into touch with the official representatives of States and municipalities in the Southeastern part of the country engaged in similar activities. The Secretary of Labor was named chairman of the conference, and the Commissioner General of Immigration acting chairman. The following program was prepared for the two-day session.

PROGRAM.

- I. Report of committee on program.
- II. Federal cooperation with States and municipalities:
 - Ethelbert Stewart, chief statistician, Bureau of Labor Statistics, Department of Labor, chairman of advisory board.
 - E. J. Watson, commissioner of agriculture, commerce, and industries of South Carolina, Columbia, S. C.
 - Justin F. Denechaud, secretary of immigration, State of Louisiana, New Orleans, and a member of national advisory board.
- III. Distribution of the unemployed:
 - C. L. Green, inspector in charge, distribution branch, Immigration Service, New York City.
 - Wortley Dickie, manager, Richmond public employment bureau, Richmond, Va.
 - John A. Tschantre, secretary, State bureau of immigration, Baltimore, Md.
 - General discussion and questions.
- IV. Settlement of unoccupied lands:
 - William H. Knowles, president, State bureau of immigration, Baltimore, Md.
 - H. K. Bryson, commissioner of agriculture, Nashville, Tenn.
 - J. L. McGrew, assistant chief, Division of Information, Department of Labor, Washington, D. C.
 - General discussion and questions.
- V. Address, Dr. F. C. Howe, commissioner of immigration at New York.
- VI. Final summary and suggestions:
 - A. Caminetti, Commissioner General of Immigration, Washington, D. C.
- VII. Address, Hon. W. B. Wilson, Secretary of Labor, Washington, D. C.
- VIII. Address, Hon. Richard I. Manning, governor of South Carolina.

After deliberation and discussion, the following resolutions were unanimously adopted:

Whereas, it is of paramount importance to the future of the Nation and the several States that every effort be made by the Federal Government and the several State governments to conserve the human resources of the Nation, making each individual as far as possible a self-sustaining and wealth-producing unit; and

Whereas, the problems of the unemployed in the centers of population and in the manufacturing and rural districts, and of bringing men upon idle lands are matters of vital concern to the welfare of the whole country; and

Whereas, the Secretary of Labor of the United States, having recognized fully these essential facts, has undertaken to provide intelligent and practical means for the solution of these two great problems and has called this district conference for the adaptation of the general plan to the conditions that must be met in the several States: Now, therefore, be it

Resolved, That it is the sense of this conference that the success of the general plan proposed by the Secretary of Labor depends upon the application of the principles of cooperation, and therefore there should be the closest cooperation between the Federal, State, and municipal authorities dealing with these problems, thus making the system of handling purely democratic, avoiding waste of money in misdirected but well-meaning but independent efforts, and instead concentrating the useful effect of each dollar expended in a cumulative manner, and making, through cooperation of the Federal, State, and municipal authority acting jointly, a clearing house for unemployment throughout the Republic, the Federal Government supplementing and aiding the States and municipalities in every way provided by law, and also establishing joint offices wherever that can be done, interchanging powers and opportunities for employment as far as possible, and affording under auspices of its officers, in furtherance of the plans of cooperation, to States and municipalities the use of the franking privilege, cooperation of the post offices in displaying notices, etc., and the States and municipalities utilizing their powers to the fullest extent in the premises.

Resolved, That agreements be entered upon in all possible instances with existing State and municipal departments and bureaus whereby a representative of the United States Department of Labor will be stationed in such offices in the State as may be agreed upon for the purpose of cooperative work.

Resolved, That this conference in taking this action proclaims that this cooperative effort is designed to provide employment for the unemployed American citizens and other residents of the United States and also to such citizens and residents upon desirable unused agricultural land, regardless of State or section whence they come, but in all instances taking due care and giving careful attention to natural preferences of different localities for laborers and settlers of particular types.

Resolved, That the purpose of this entire effort is to care for unemployment problems in any State from the ranks of the unemployed of that State first, then from adjoining States, and then from distant States, etc., and so with the bringing of settlers to the land.

Resolved, That the Secretary of Labor be requested to put such plan of cooperation into effect in the States here represented at the earliest possible date.

Resolved, That the officials representing States and municipalities at this conference recommend that the plan of operation outlined in the foregoing be adopted by all States and municipalities in the South having departments or bureaus charged with the class of work contemplated, and, further, that those States and municipalities not having such departments or bureaus endeavor to secure by legislation such departments or bureaus, in order that they may adopt the plan.

Resolved, That we express to the Secretary of Labor our thanks for calling this conference, and respectfully suggest to him the calling of another such conference in the South in the spring.

Whereas, There has been a quite encouraging response to the invitation of the Secretary of Labor to meet in conference in this city, and

Whereas: Those of us who have gathered here have been the recipients of many courtesies and attentions at the hands of our friends of the city of Charleston and of this hospitable State, now, therefore, be it

Resolved, That the thanks of this conference be extended to those who have favored us with their presence and encouragement, to the officials of the State and city, and all others who have made our stay here both pleasant and inspiring.

Those attending the Conference were—

Hon. W. B. Wilson, Secretary of Labor, Washington, D. C.
 Anthony Caminetti, Commissioner General of Immigration, Department of Labor, Washington, D. C.
 A. Warner Parker, law officer, Bureau of Immigration, Department of Labor, Washington, D. C.
 Ethelbert Stewart, chief statistician, Bureau of Labor Statistics, Department of Labor, Washington, D. C.
 J. L. McGrew, assistant chief, Division of Information, Bureau of Immigration, Department of Labor, Washington, D. C.
 Frederic C. Howe, commissioner of immigration, New York City.
 P. L. Prentis, inspector in charge, Immigration Service, Chicago, Ill.
 Geo. A. Mahone, immigrant inspector, Baltimore, Md.
 W. R. Morton, inspector in charge, Immigration Service, Norfolk, Va.
 C. L. Green, inspector in charge, distribution branch, Immigration Service, New York City.
 Thomas V. Kirk, inspector in charge, Immigration Service, Jacksonville, Fla.
 John P. Mayo, commissioner of immigration, New Orleans, La.
 Jas. B. Bryan, inspector in charge, Immigration Service, Galveston, Texas.
 Wm. Vaughn Howard, inspector, Immigration Service, Charleston, S. C.
 Justin F. Denechaud, secretary, State board of immigration, New Orleans, La.
 Hon. Richard I. Manning, governor of South Carolina.
 B. B. Hare, State statistical agent, U. S. Department of Agriculture, Saluda, S. C.
 Wortley Dickie, manager, Richmond public employment bureau, Richmond, Va.
 John A. Tschantre, secretary, State bureau of immigration, Baltimore, Md.
 Wm. H. Knowles, president, State bureau of immigration, Baltimore, Md.
 J. D. Price, State commissioner of agriculture, Atlanta, Ga.
 H. K. Bryson, State commissioner of agriculture, Nashville, Tenn.
 V. W. Lewis, representative of Queen and Crescent Route, Chattanooga, Tenn.
 E. J. Watson, State commissioner of agriculture, commerce and industries, Columbia, S. C.
 S. R. Graham, Hiawatha, Kans.
 Frank A. White, chief, Maryland bureau of statistics and information, Baltimore, Md.

ADDRESS OF HON. WILLIAM B. WILSON, SECRETARY OF LABOR, BEFORE THE FIRST SOUTHERN STATES CONFERENCE ON EMPLOYMENT AT CHARLESTON, S. C., FRIDAY, DECEMBER 17, 1915.

Mr. Chairman, Governor, and gentlemen of the conference: I am reminded this afternoon of the words of the Master when he was here on earth that "where two or three are gathered together in my name, there am I in the midst of them," and I have always felt that where two or three are gathered together for the purpose of working out the problems of human association, there the Master is in the midst of them. When the Constitutional Convention met in 1787 one of the delegates from Massachusetts, Mr. Gerry, proposed at the opening of the sessions that there should be a record vote on all of the propositions that came before the convention, and Col. Mason, a delegate from Virginia, objected and made this suggestion: That they had come into that convention without any preconceived ideas of the ultimate form that the Constitution should take; that during the discussions men would take particular viewpoints relative to items, articles, or sections that should be included in the document, but after the fuller discussion of the subject matter their viewpoint might change, and

that it would be a very embarrassing situation in developing the Constitution if, as they went along, each one was required to make a record of his vote. It would be embarrassing because it would be difficult for him to overcome the natural prejudice there is against taking various viewpoints and then having to change them after discussion. I have felt that in these conferences we are holding in various parts of the country we are in exactly the same situation. We have come here without any fixed viewpoints. We have viewpoints, it is true, but they are not so unalterably fixed but that by discussion we may change them. If discussion did not change them this conference would be valueless.

In dealing with the problem of unemployment we have one of the greatest of the existing problems of human association before us. There has been a wonderful growth of our urban population. It has grown out of all proportions to our rural population. There has been a tremendous growth of our industrial activities, and because of the tremendous growth it has not been systematized along the line of utilizing our labor power to its fullest value. We have had exchanges for all kinds of things, all kinds of commodities. There have been built up places where men may come to invest in stocks; places where men may come to buy wheat, cotton, mules—anything and everything that is in use; but we have had no clearing house where the employer and the employee could meet and know that both could be satisfied.

The new Department of Labor of the Federal Government has been authorized among other things to advance the opportunities for profitable employment of the wage earners of the United States. In addition to that there is in the immigration laws a provision which creates a division of information for practically the same purpose. We have undertaken to secure cooperation of State and municipal bodies on the same subject matter in order to make a more effective organization than the Federal Government could accomplish alone. We do not hope to solve entirely the problem of unemployment as a result of the work we are doing with regard to labor distribution. We do hope, however, that, in so far as there are opportunities for employment, by the establishment of clearing houses of information on that subject, these opportunities can be filled and by filling them reduce unemployment to a minimum. When we have reduced unemployment to a minimum, when we have found employment for every unemployed man for whom there is a job, then dealing with the balance will be a much easier problem than dealing with them now. In that connection it must always be borne in mind that the land is the basis upon which human existence rests, and if there are means open by which those who are unemployed in industrial pursuits may have access to the land, have means of cultivating the land, and of subsistence until they can get returns from the land, then we will be in a position to absolutely solve the question of unemployment and create a continuous balance as between the urban and rural population of our country.

In connection with that we are suggesting to the Federal Congress the idea of placing at the disposal of the Department of the Interior, the Department of Agriculture, and the Department of Labor the surplus head tax that has accrued from the admission of aliens into the United States in excess of the cost of handling the Immigration Service. We believe that the head tax was never intended to be a producer of revenue; that it was placed upon the immigrant primarily for the purpose of meeting the expense of carrying on the Immigration Service, and secondly, of protecting the alien after he arrives in the United States. These were the purposes of imposing the tax on the immigrant, and yet the tax itself has produced a revenue of approximately ten million dollars in excess of the actual needs of the Immigration Service. That money is now in the Treasury of the United States. If Congress in its wisdom can be induced to appropriate that ten million dollars to be continuously available for expenditure under the joint direction of the three departments, while it is but a drop in the bucket compared with the problem with which we are dealing, yet it could be

used over and over again to assist in relieving the problem of unemployment in our large cities. Under ordinary circumstances there are large numbers of unemployed men in our big cities who have had agricultural training and there are people coming to our shores every day who have had agricultural training in Europe, and who, if they had the means, would gladly go out upon our lands. They do not go out, however, from our cities, either the native or the alien, as farm laborers, because of the fact that in nearly every instance farm labor is seasonal labor; and while they may go out for a season or two seasons and find employment, they ultimately drift back into the towns and cities and are unable to get back into our agricultural communities and acquire land. They have not the means in the first place, and, not having the means, of course, our banking institutions can not give them the necessary credits. You would not want nor like to be a depositor in a banking institution that accepted credits of that kind as a basis for its loans.

Banking institutions in order to be sound, in order to be faithful to the community in which they exist, must insist upon some kind of substantial credits that can be realized upon in order that they may be protected in their loans. If these ten millions of dollars, however, could be made available for the three departments mentioned and utilized for the acquisition of lands, then divide the lands in such a manner as to establish community centers where community life would exist even on the farm, then take your colonists out to occupy your lands in that particular community, utilizing mortgages upon the lands as a basis for credit and personal notes as a protection for the money advanced for the purchase of tools and machinery with which to work the farms and for subsistence; and if, in addition to the mortgage and notes, you have the indorsement of every member of the community for each individual, you would have a class of security that would make the Government practically absolutely safe in loaning this money without having to use bank securities for it. The money would be coming back in two or three years and keep on coming back. If it was found that the expenditure of that ten millions was a practical matter, it would not be difficult to induce Congress to make additional appropriations. One difficulty occurs, however, and that is that when the Federal Government steps into South Carolina or any other State and acquires land in that manner, immediately the adjoining land is enhanced in value. The people who hold the adjacent land will not sell it to the Federal Government at the same rates that the first tract was acquired. So there should be some means for preventing those who are holders of the land from securing the unearned increment that they have not been responsible for creating. So that means ought to be devised that the Government could buy the surrounding land at the same price paid for the first tract whenever the owners desired to sell. Whether that can be worked out I do not know, but I throw the thought out as worthy of consideration.

In carrying out the work of labor distribution our first problem was that of dealing with the harvest hands in the Middle West, and then the work of industrial institutions. In brief we have come to this conclusion, that the proper course for us to pursue is to have the municipal, the State and the Federal agencies operating in the same suite of rooms, with the municipal agency utilizing its close touch with the people of the community for the gathering and dissemination of information relative to employment; the State agency utilizing its close touch with people in the State for the purpose of gathering and disseminating information; the Federal institution utilizing its broader field and its franking privilege in order to keep both branches in touch with exterior points; and that by the three cooperating in the same building and in the same suite of rooms you have created but one central clearing house for labor, and there would not be the mixed condition that would grow out of having the three labor bureaus in the same city working separately. There could be as many branches as the needs of the city or State required, but they should all be managed

cooperatively. By doing so we can reduce unemployment to the minimum, and having reduced it to the minimum we can proceed to deal with the problem of the unemployed who still remain, free from the embarrassment of having a large number of unemployed.

I thank you gentlemen from the various States and cities for your courtesy in responding to our invitation to be here. I want to assure you that we seek to cooperate with you to the fullest extent in solving these great problems of unemployment and a sensible, practical back-to-the-land movement that can be worked out on a sound basis.

LABOR DISTRIBUTION BY THE FEDERAL DEPARTMENT OF LABOR.

With the close of December, 1915, the Division of Information practically completes the first nine-month period of its activities under its present broadened and improved system of labor distribution. An account of the organization and work of the division up to July, 1915, will be found in the MONTHLY REVIEW for July, 1915.

While this extension of the work of the division begins with the latter part of the fiscal year 1914, none of the arrangements were in full operation until sometime in February last, and it was well along in March before the entire machinery could be said to be in working order.

The following table classifies by citizens of the United States and by aliens the number and percentage of each of these classes for whom places were secured from 1908 to 1915.

CITIZENSHIP OF PERSONS SECURING EMPLOYMENT THROUGH THE DIVISION OF INFORMATION OF THE BUREAU OF IMMIGRATION, 1908-1915.

[Source: Annual Reports of the Chief of the Division of Information, Washington, 1908-1915.]

Fiscal year ending June 30—	Number.			Per cent.		
	United States citizens.	Not naturalized.	Total	United States citizens.	Not naturalized.	Total.
1909.....	517	4,491	5,008	10.32	89.68	100.00
1910.....	582	3,721	4,283	13.12	86.88	100.00
1911.....	500	4,676	5,176	9.66	90.34	100.00
1912.....	923	4,884	5,807	15.89	84.11	100.00
1913.....	964	4,061	5,025	19.18	80.82	100.00
1914.....	533	2,835	3,368	15.83	84.17	100.00
1915.....	8,114	3,757	11,871	68.40	31.60	100.00

The statistics published by the division show that for the years 1908 to 1915, inclusive, the percentage of United States citizens, as compared with foreign-born, not naturalized, for whom employment was secured, was the lowest in this period in 1911, when it was 9.66, and the highest in 1913 when it was, 19.18; but in 1915 this percentage rose to 68.4.

In considering these the decrease in immigration beginning in August, 1914, and continuing up to this date must be taken into

account. The absolute figures however show a very large increase in the number of United States citizens seeking employment through the division.

The following table shows the number of applications for positions made to the Division of Information and the number of places filled and the number of applications per 100 places filled, 1908 to 1916.

TOTAL APPLICATIONS MADE TO THE DIVISION OF INFORMATION OF THE BUREAU OF IMMIGRATION SINCE ITS ORGANIZATION, SEPTEMBER, 1907, PLACES FILLED, AND NUMBER OF APPLICATIONS PER 100 PLACES FILLED.

Fiscal year ending June 30—	Applicants for positions.	Places filled.	Number of applications per 100 places filled.
1908.....	(¹)	840	.....
1909.....	26,477	4,168	635.2
1910.....	18,239	4,283	425.8
1911.....	30,657	5,176	592.3
1912.....	26,213	5,807	451.4
1913.....	19,891	5,025	395.8
1914.....	19,393	3,368	575.8
1915.....	90,119	11,871	759.1
1916 (6 months).....	85,247	29,519	288.8

¹ Not reported.

Since May, 1915, the statistics of the operations of the division were considerably extended so as to show not only the number of applicants for positions and places filled, but also the number of calls for help from employers and the number actually employed of these so referred. This additional information has been tabulated in the following statement:

OPERATIONS OF THE DIVISION OF INFORMATION, BUREAU OF IMMIGRATION DURING THE MONTHS OF MAY TO DECEMBER, 1915.

Month.	Number of applications for help.	Number of persons applied for.	Number of applicants for places.	Number referred to employment.	Number actually employed.	Number of applications per 100 places filled.
May.....	638	3,826	12,132	3,752	3,495	347.1
June.....	1,249	3,601	14,530	5,131	4,646	312.7
July.....	1,160	8,665	18,061	6,360	6,035	299.3
August.....	1,279	7,931	17,827	7,321	6,757	263.8
September.....	1,201	4,551	13,334	5,671	5,405	246.8
October.....	1,104	5,423	12,215	5,460	5,006	244.0
November.....	847	4,650	11,908	4,459	4,146	237.2
December.....	698	3,588	11,902	2,622	2,170	548.5

CONCILIATION WORK OF THE DEPARTMENT OF LABOR, DECEMBER 16, 1915, TO JANUARY 15, 1916.

On the authority contained in the organic act of the department to mediate in labor disputes and to appoint commissioners of conciliation in its discretion, the Secretary of Labor, through the commissioners of conciliation, exercised his good offices in five labor

disputes between December 16, 1915, and January 15, 1916. The establishments involved in these controversies, the number of employees affected, and the results secured, so far as available, are shown in the following statement:

NUMBER OF LABOR DISPUTES HANDLED BY THE DEPARTMENT OF LABOR THROUGH ITS COMMISSIONERS OF CONCILIATION, DEC. 16, 1915, TO JAN. 15, 1916.

Name and locality.	Workmen affected.		Result.
	Directly.	Indirectly.	
Strike, Studebaker Co., South Bend, Ind.....	100	4,500	Amicable adjustment.
Federal Glass Co., Columbus, Ohio.....	Pending.
Shirt-waist workers, Philadelphia.....	Pending.
New Haven Clock Co., New Haven, Conn.....	Pending.
Metal polishers, Meriden, Conn.....	Pending.

IMMIGRATION DURING NOVEMBER AND DECEMBER, 1915.

The November and December bulletins issued by the Bureau of Immigration show very little change in the number of aliens arriving during these months as compared with the months immediately preceding. The number departing, however, shows a considerable per cent. of decrease. The average number of immigrant aliens admitted during the period January 1 to October 31, 1915, was 21,523 per month, and the average number of emigrant aliens departing for the same period was 13,518 per month. During the two months named the number of immigrant aliens admitted was 24,545 and 18,951 for the respective months, and the number of emigrant aliens departing during the same months was 14,483 and 10,974, respectively.

A comparison with the figures for the corresponding months of 1914 shows percentage decreases in the number of alien immigrants admitted during the months under review of 6.7 and 9.5, and in the number of emigrant aliens departing, decreases of 37.3 and 53.9 per cent for the respective months.

Preliminary reports for January 1 to 15, 1916, show a gradual increase in the number of all aliens arriving (immigrant and non-immigrant) over the corresponding period of 1915. Thus, on January 7, over the 10-day period preceding, the increase was 8 per cent; on January 8, 24 per cent; on January 9, 32 per cent; on January 10, 62 per cent; on January 11, 49 per cent; on January 12, 36 per cent; on January 13, 19 per cent; on January 14, 21 per cent; and on January 15, 25 per cent.

The table which follows shows the percentages of decrease in immigration and emigration in 1915 as compared with 1914, by months. As both immigration and emigration had decreased considerably during the last half of 1914, the percentages if compared with 1913 would be much larger.

DECREASE, IN PER CENT, OF ADMISSIONS AND DEPARTURES OF ALIENS IN EACH MONTH, 1915 AS COMPARED WITH 1914.

	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
Decrease, in per cent, of immigrant aliens admitted..	65.4	70.4	70.2	70.6	75.8	68.5	64.4	41.8	15.0	10.3	6.7	9.8
Decrease, in per cent, of emigrant aliens departing.	49.6	58.6	43.6	63.5	62.8	71.8	65.5	3.3	21.7	30.7	37.3	52.9

¹ Increase.

The table which follows shows for the months of November and December, 1914 and 1915, the number of immigrant aliens admitted and of emigrant aliens departing, by races, and the percentage of decrease as compared with the corresponding months of 1914.

IMMIGRANT ALIENS ADMITTED TO AND EMIGRANT ALIENS DEPARTING FROM THE UNITED STATES DURING NOVEMBER AND DECEMBER, 1914 AND 1915.

Race.	November—		December—		November—		December—	
	1914	1915	1914	1915	1914	1915	1914	1915
African (black).....	389	331	215	174	196	390	98	115
Armenian.....	90	90	84	43	7	54	9	16
Balkan and Slavonian.....	162	73	97	48	1	8	1	6
Bulgarian, Serbian, and Montenegrin.	363	99	201	91	322	30	230	9
Chinese.....	184	164	212	230	399	268	261	209
Croatian and Slavonian.....	85	111	44	96	13	6	4	11
Cuban.....	168	257	62	108	140	107	311	177
Dalmatian, Bosnian, Herzegovinian..	19	8	11	12	1	1	.....	1
Deutsch and Flemish.....	799	782	695	695	82	57	88	56
East Indian.....	13	4	3	8	18	21	28	4
English.....	2,867	3,549	3,100	2,874	811	616	849	647
Finnish.....	239	397	224	644	11	34	62	61
French.....	1,300	2,300	660	1,215	261	169	171	207
German.....	1,836	1,092	1,172	990	44	95	46	76
Greek.....	1,036	853	876	521	888	267	1,688	881
Hebrew.....	1,063	1,676	748	1,320	26	28	20	18
Irish.....	2,188	2,696	1,224	1,149	247	236	197	168
Italian (North).....	878	431	1,233	191	801	347	899	674
Italian (South).....	3,699	2,441	4,047	941	15,907	8,440	14,872	4,097
Japanese.....	754	590	702	626	96	99	68	51
Korean.....	16	7	20	1	6	.....	7	2
Lithuanian.....	74	53	39	39	7	3	9	.....
Magyar.....	141	166	64	115	49	31	.....	28
Mexican.....	716	1,096	847	1,538	81	103	81	67
Pacific Islander.....	.....	.....	.....	1	.....	.....	.....	.....
Polish.....	301	339	199	477	35	20	113	13
Portuguese.....	319	668	142	1,976	331	407	551	490
Roumanian.....	35	62	21	60	31	3	76	27
Russian.....	319	449	264	560	461	274	849	292
Ruthenian (Rusnak).....	68	64	27	71	3	.....	2	2
Scandinavian.....	2,666	1,213	1,990	1,280	219	277	346	656
Scotch.....	1,543	1,390	1,261	1,080	194	207	196	165
Slovak.....	76	99	28	66	.....	5	.....	5
Spanish.....	422	697	252	471	211	321	329	294
Spanish-American.....	70	119	165	64	53	36	47	26
Syrian.....	224	69	65	37	16	12	11	6
Turkish.....	19	5	.....	9	6	4	13	3
Welsh.....	110	112	197	91	20	32	11	43
West Indian (except Cuban).....	61	64	36	36	37	57	70	73
Other peoples.....	223	47	180	21	21	37	24	19
Not specified.....	.....	.....	.....	.....	1,005	1,019	1,148	799
Total.....	26,298	24,845	29,944	18,901	23,100	14,483	23,321	19,974
Per cent decline, 1915.....	.....	6.7	.....	2.8	.....	37.3	.....	52.9

RETAIL PRICES OF FOOD IN THE UNITED STATES.

Bulletin No. 184, showing the retail prices of the principal articles of food in each of 45 important industrial cities of the United States, has just been issued by the Bureau of Labor Statistics. This bulletin, which is one of a series on retail prices published by the bureau, shows actual prices for January to June, 1914, and January to June, 1915, and also summarizes retail prices for the period from 1907 to June, 1915.

Later figures showing the course of prices in the United States are now available for September, 1915.

These figures show that prices, as a whole, in September, 1915, were 1 per cent less than in January, 1915, and were the same as for the year 1914. The lowest point in the nine months of 1915 was reached in March, when prices were 5 per cent lower than in September.

From July, 1915, to September, 1915, there was an increase of 1 per cent in the price of all articles combined, although 11 of the 17 articles declined in price and 4 remained the same. The 2 articles which increased in price, however, made a marked advance, particularly eggs, which jumped 25 per cent, largely due to change in season.

In September, 1915, however, prices showed a decline from September, 1914, of 5 per cent and were the same as for September, 1913.

The following table shows for nine months of 1915, January to September, inclusive, the relative prices of each of the 17 articles and also the relative prices of the 17 articles combined and weighted according to the average consumption in workingmen's families:

RELATIVE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD ON THE 15TH OF EACH MONTH, JANUARY TO SEPTEMBER, 1915, INCLUSIVE.

[Average price for 1914=100.]

Commodity.	Jan. 15.	Feb. 15.	Mar. 15.	Apr. 15.	May 15.	June 15.	July 15.	Aug. 15.	Sept. 15.
Sirloin steak.....	98	96	95	97	99	101	103	102	102
Round steak.....	96	95	93	95	98	99	101	101	100
Rib roast.....	98	97	96	97	98	100	101	101	100
Chuck roast.....	96	94	93	93	95	96	97	97	96
Plate boiling beef.....	98	97	96	96	97	97	97	97	97
Pork chops.....	84	81	81	90	95	94	96	98	103
Bacon, smoked.....	99	97	96	96	97	98	99	99	98
Ham, smoked.....	97	95	93	93	94	95	96	96	95
Lard, pure.....	99	98	98	97	97	97	94	91	89
Hens.....	93	95	97	98	99	96	95	95	95
Wheat flour.....	120	133	131	132	134	125	120	119	113
Corn meal.....	104	104	104	104	104	104	103	103	103
Eggs.....	126	96	73	74	74	76	79	86	99
Butter, creamery.....	106	104	99	99	96	96	95	93	93
Potatoes, Irish.....	78	77	76	79	82	91	78	75	73
Sugar, granulated.....	101	109	111	113	115	117	117	113	109
Milk, fresh.....	100	100	99	98	98	98	98	98	98
All commodities combined ..	101	98	95	96	97	97	99	99	100

WHOLESALE PRICES IN 1914.

According to Bulletin No. 181 of the Bureau of Labor Statistics, wholesale prices in the United States, as measured by the aggregate value in exchange of 340 representative commodities, were nearly 1 per cent lower in 1914 than in 1913. In each of four groups, viz., cloths and clothing, fuel and lighting, metals and metal products, and lumber and building materials, more than half of the commodities decreased in price from 1913 to 1914. Decided decreases occurred in the yearly average prices of cotton yarns, print cloths, storm serge, Silician cloth, worsted yarns, coke, gasoline, crude petroleum, bar iron, copper ingot, sheet copper, copper wire, iron ore, pig lead, lead pipe, pig iron, cast-iron pipe, steel billets, steel-tank plates, steel sheets, structural steel, pig tin, wood screws, brick in New York City, plate glass, Douglas fir, rosin, and cedar shingles. Increases in price are shown for cotton blankets, boots and shoes, leather, 10-4 bleached sheeting, quicksilver, linseed oil, turpentine, and a few other articles in the four groups named.

A majority of the articles which increased in price between 1913 and 1914 belong to the farm products and food groups. Within these two groups, comprising 124 series of price quotations, 72 commodities or grades of commodities increased in price, 44 decreased, and 8 were unchanged. The articles showing the greatest increase were corn, oats, rye, wheat, flaxseed, New York State hops, calfskins, peanuts, tobacco, canned corn, rye flour, wheat flour, fresh and evaporated apples, prunes, raisins, corn meal, sugar, cabbage, onions, potatoes, and vinegar. Some of the articles in these two groups which decreased in price were cotton, butter, canned tomatoes, coffee, lemons, and oranges.

Of 10 commodities classed as drugs or chemicals, 5 increased in price, 4 remained stationary, and 1 decreased in price in 1914, compared with 1913. The 5 articles showing an increase were alum, glycerin, grain alcohol, opium, and quinine. The article which decreased in price was wood alcohol.

Of the 340 series of prices secured by the bureau for 1913 and 1914, 122 series showed an increase between these two years, 154 showed a decrease, while no change occurred in the case of 64 series.

The most marked fluctuations during 1914 occurred in the prices of articles belonging to the farm products, food, metals and metal products, and fuel and lighting groups. Farm products increased in price from January to August, after which they steadily declined. In the food group prices were lowest in March, April, and May, increasing to their maximum in September, while in the metals and metal products group, and also in that of fuel and lighting, prices were highest in the first three months of the year and lowest in the

last three. Drugs and chemicals were lowest during the first eight months and highest during the last four months of the year. In the remaining groups, taken as a whole, prices showed a rising tendency during the earlier part and a falling tendency during the latter part of 1914.

The report shows that violent fluctuations took place during 1914 in the prices of many commodities, particularly foodstuffs. Comparing the lowest with the highest average monthly price within the year for those articles showing a net increase, it is seen that granulated sugar varied 83 per cent; rye, 79 per cent; opium, 63 per cent; alum, 57 per cent; glycerin, 37 per cent; wheat in Minneapolis, 36 per cent; contract corn in Chicago, 32 per cent; and oats, 31 per cent. Of the articles for which a net decline in price for the year is reported, cotton in New Orleans shows a variation of 50 per cent between the highest and the lowest average monthly price; crude petroleum, 42 per cent; cottonseed oil, 31 per cent; linseed oil, 25 per cent; and ingot copper, 24 per cent.

In computing the index number published in the bulletin, and which is designed to show changes in the general price level from year to year, the base period from which price fluctuations are measured has been shifted from the 10 years, 1890-1899, used in former reports, to the last completed year, 1914. This change was made for the double purpose of utilizing the latest and most trustworthy price quotations as the basis for the computations and also to permit of the addition of new articles to those formerly included in the index number. The former method of averaging the relative prices of individual commodities to obtain group and general index numbers has also been superseded in the present report by the method of constructing these index numbers from the aggregate value of all commodities exchanged year by year from 1890 to 1914. The old form of presentation, however, has been retained in conjunction with the new form in order that direct comparison with preceding wholesale price reports of the bureau may be made.

STRIKES AND LOCKOUTS IN THE UNITED STATES FROM JULY THROUGH DECEMBER, 1915.

According to data compiled by the United States Bureau of Labor Statistics from the various sources at its command, the number of strikes and lockouts during the six months, July to December, inclusive, was 735. The total number of strikes and lockouts occurring during the 12 months of the calendar year, including a few that began prior to January 1, 1915, but have been settled during the year, was 1,393. Inasmuch as strikes that start toward the end of a

month are sometimes not brought to the attention of the bureau until the following month, it is possible that the corrected figures for 1915 will show a total number of strikes exceeding 1,400, a number larger than that reported for 1914—1,080.

The following table, which has been corrected for months previous to December as reports have come in during the latter month, shows the number of strikes and lockouts begun in each of the months of July to December, inclusive, but excluding 60 strikes and 9 lockouts which started during months not specified. The strikes and lockouts were distributed among the months as follows:

NUMBER OF STRIKES AND LOCKOUTS, JULY THROUGH DECEMBER, 1915, BY MONTHS.

	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
Strikes.....	93	126	152	95	86	82	614
Lockouts.....	5	6	10	8	6	4	39
Total.....	98	142	162	103	92	86	653

A brief account of the character of the strikes occurring from July to November may be found in the January number of the MONTHLY REVIEW. The data in the tables which follow relate to 113 strikes and lockouts concerning which information was received by the bureau during the month of December, and includes strikes and lockouts which occurred in previous months as follows: November, 15; October, 2; September, 2; July, 1; and 37 for which the dates of commencement were not reported but occurred for the most part in the months of November or December.

Three-fourths of the strikes reported during December were in the northeastern section of the country, and all but 15 were in the States east of the Mississippi and north of the Potomac and the Ohio Rivers. The following table shows the States in which 5 or more strikes occurred:

STATES IN WHICH 5 OR MORE STRIKES OCCURRED DURING DECEMBER, 1915.

State.	Strikes.	Lockouts.	Total.
New York.....	26	3	29
Pennsylvania.....	19	3	22
Massachusetts.....	12	.....	12
Ohio.....	9	1	10
Connecticut.....	6	.....	6
Illinois.....	5	.....	5
15 other States.....	25	4	29
Total.....	102	11	113

Two of these strikes were confined to women and 12 included both men and women. No lockouts were reported in which women were concerned.

The industries in which nine or more strikes and lockouts were reported were as follows:

NUMBER OF STRIKES AND LOCKOUTS IN SPECIFIED INDUSTRIES, REPORTED DURING DECEMBER, 1915.

Industry.	Strikes.	Lockouts.	Total.
Metal trades.....	31	4	35
Clothing industries.....	21	1	22
Textile workers.....	9	2	11
Building trades.....	9	.....	9
Miners.....	9	.....	9
All others.....	23	4	27
Total.....	102	11	113

Of the disturbances in the metal trades, 10 strikes and 3 lockouts were by machinists, 8 strikes by molders, and 5 by metal polishers; 7 of the miners' strikes were by coal men.

In 69 strikes and 9 lockouts the strikers were connected with unions; in 3 strikes the strikers were not connected with unions at the time of striking, but almost immediately organized themselves into unions; in the remaining strikes and lockouts, it was not stated whether the strikers had union affiliation or not.

In 84 cases the causes of the strikes and lockouts were given. Of these, 47 related to wages, 11 to hours, and 19 to recognition of the union. Very nearly three-fourths of the strikes were in regard to wages and hours.

PRINCIPAL CAUSES OF STRIKES AND LOCKOUTS REPORTED DURING DECEMBER, 1915.

Cause.	Strikes.	Lockouts.	Total.
Wage increase.....	21	.....	21
Reduction of hours.....	2	.....	2
Wages and hours.....	7	.....	7
Wages and recognition.....	14	.....	14
Wages, hours, and recognition.....	2	.....	2
Recognition.....	3	.....	3
Presence of nonunion men.....	12	.....	12
Discharge of employees.....	3	.....	3
Because of wage reduction.....	3	.....	3
To prevent unionizing.....	.....	5	5
Other causes.....	12	.....	12
Total.....	79	5	84

In 48 of the strikes the number of the persons involved was reported to be 56,838. In 6 of these, each involving 1,200 or more, the number of strikers was 47,500, leaving 9,338 distributed among 42 strikes, or an average of about 222 persons connected with each strike, omitting the 4 largest, or about 1,173, if all are included. In 5 lockouts, the number of employees involved was reported to be 1,475, or an average of 295.

The duration of 29 strikes ending in December was given as 459 days, if we omit 1 strike, which had lasted for three years, making the average length of the 28 strikes about 16 days. Two lockouts terminated with a total cessation from work of 31 days.

REDUCTION OF HOURS OF LABOR IN THE MACHINE TRADES.

A movement for the reduction of hours of labor, notable for its rapid progress, has taken place in the machine trades since late in the summer of 1915. It has chiefly affected the firms having contracts for making war munitions, though not exclusively restricted to such establishments. The demands for reduced hours have usually come from machinists, although other occupations have joined, and in most establishments all employees have received the benefits in the reduction of hours which have been granted to machinists. Reduced hours of labor have in practically all cases been effected with no reduction in weekly wage, and in many cases with increased wages.

A partial list of the firms which had established the 8-hour day or granted a reduction in hours up to the middle of September was published in the October, 1915, issue of the REVIEW. The International Association of Machinists has furnished the bureau a list supplementing the earlier list of firms which had granted reductions of hours up to the end of 1915. The following firms have established an 8-hour day, with reductions in most cases of 7 hours in a working week.

Bridgeport, Conn.:

American Graphophone Co.

Lake Torpedo Boat Co.

Meriden, Conn.:

New England Westinghouse Co.

New Haven, Conn.:

Geometric Tool Co.

Sheldon, Conn.:

The R. N. Basset Shop.

Wilmington, Del.:

Vogel Machine Co.

Chicago, Ill.:

Stewart Warner Speedometer Co.

Western Electric Co.

Baton Rouge, La.:

Standard Oil Co.

Baltimore, Md.:

Pool Engineering Co.

Universal Machine Co.

Lowell, Mass.:

Heinze Electric Co.

U. S. Cartridge Co.

Springfield, Mass.:

Barley Machine Co.

Barney & Berry (Inc.).

Bausch Machine Tool Co.

Bay State Corset Co.

Blake Machine Co.

Duckworth Chain Co.

Gilbert & Barker Co.

Springfield, Mass.—Concluded.

Hendee Motorcycle Co.

Kibbie Candy Co.

Knox Automobile Co.

Knox Motor Co.

National Equipment Co.

Package Machinery Co.

Rider Bagg Co.

Russell Machine Co.

Stacy Machine Co.

United States Saw Co.

Detroit, Mich.:

Siewek Bros.

The Studebaker Corporation.

Camden, N. J.:

Victor Talking Machine Co.

Garwood, N. J.:

Bell Electric Co.

Hyatt Roller and Bearing Co.

Perth Amboy, N. J.:

American Smelting & Refining Co.

Annes-Potter Brick Co.

Barber Asphalt Co.

Lyons-Flynn Co.

Perth Amboy Dry Dock.

Raritan Dry Dock Co.

Raritan Copper Works.

R. & H. Chemical Co.

Shantz & Exkert.

Standard Cable Co.

Perth Amboy, N. J.—Concluded.

Union Lead Co.
United States Cartridge Co.
Patrick Whites.

Plainfield, N. J.:

Manganese Steel Safe Co.

South Plainfield, N. J.:

Spicer Manufacturing Co.

Trenton, N. J.:

J. L. Mott.

Harry Stahl.

E. Wilkes.

New York City and vicinity:

Adriance Machine Co.

Acme Die Casting Co.

Auto Press Co.

Blair Machine Co.

Bliss Manufacturing Co.

Cameron Machine Co.

Carpenter Tool Co.

Hoe Printing Press Co.

Doehler Die Casting Co.

W. W. Kellog Co.

Notham Manufacturing Co. (49 hours).

Rockwell Engineering Co.

Schroeder Machine Co.

New York City and vicinity—Concluded.

Sperry Gyroscope Co.

Wappler's Electric Co.

Cincinnati, Ohio:

United States Printing & Lithograph Co.

United States Playing Card Co.

Cleveland, Ohio:

Cleveland Automatic Co.

F. B. Stearns Auto Manufacturing Co.

Sewer & Morgan Co.

Springfield, Ohio:

Springfield Machine Tool Co.

Toledo, Ohio:

American Can Co.

Bock Bearing Co.

City Machine Tool Co.

Consolidated Manufacturing Co.

O'Neill Machine Co.

Youngstown, Ohio:

William Todd Co.

Pittsburgh, Pa.:

Pittsburgh Machine Tool Co.

Providence, R. I.:

Providence Engineering Co.

Milwaukee, Wis.:

Milwaukee Die & Casting Co. (44 hours a week).

The following firms have granted reductions in hours, although the hours are still somewhat in excess of the straight 8-hour day:

Forty-nine and one-half hours per week.

Columbus, Ohio: Hearne Manufacturing Co., Rudd Manufacturing Co., Shiriner Co., Modern Tool & Die Co.

Fifty hours per week.

Connecticut: New Departure Roller Bearing Co., Bristol; Birmingham Foundry & Machine Co., Derby. New Jersey: Wickes Bros., Jersey City; J. A. Beebling Co., Trenton. New York City and vicinity: Davis Bourville Co.

Fifty-four hours per week.

Connecticut: Hendee Machine Co., Torrington. Pennsylvania: Westinghouse Co., East Pittsburgh.

EMPLOYMENT IN NOVEMBER AND DECEMBER, 1915.

In the January, 1916, MONTHLY REVIEW figures were published showing for several industries for the months of October and November, 1915, the total number of persons employed and the total amount paid out in wages in a number of representative establishments, with

percentages indicating the change in these items in November as compared with October. The purpose of these figures was to compare the volume of employment in the different months.

The data were secured on blanks sent to representative establishments. Announcement was made that these figures would be continued from month to month. Following suggestions received, the inquiry sent out at the end of the year for December, 1915, figures included a request for December, 1914, figures also. The returns for December have not been as satisfactory as for November. In order that manufacturers may see the scope of the inquiries and the results obtained, the table below shows the number of establishments to which inquiry was sent and the number of replies received. It is the purpose of the bureau to make these figures of practical service as well as of interest to manufacturers. The bureau desires to enlarge this feature of its statistical work to include more establishments in the industries already covered and to take on other industries, but at the same time it desires to establish a list of firms that will cooperate and furnish reports regularly in the industries here covered before extending the work. Each establishment to which inquiry is sent is requested, therefore, to send in a report promptly that it may reach Washington not later than the twelfth of the month following the month reported.

Two tables are here presented, one making a comparison between the figures of November and December, 1915, and the other between December, 1914, and December, 1915:

COMPARISON OF EMPLOYMENT IN IDENTICAL ESTABLISHMENTS IN NOVEMBER AND DECEMBER, 1915.

Industry.	Estab- lish- ments to which in- quiries were sent.	Estab- lish- ments re- spon- ding.	Period of pay roll.	Employees.			Earnings.		
				Number on pay roll in—		Per cent of increase (+) or de- crease (-).	Amount of pay roll in—		Per cent of increase (+) or de- crease (-).
				Novem- ber.	Decem- ber.		Novem- ber.	Decem- ber.	
Boots and shoes.....	89	75	1 week.	39,609	43,166	+9.0	\$498,343	\$544,659	+9.3
Cotton goods.....	91	47	do.....	37,099	37,865	+ .7	305,211	299,844	-1.9
Cotton finishing.....	20	8	do.....	7,580	7,680	+1.3	83,377	85,573	+2.6
Hosiery and underwear	82	44	do.....	23,606	23,940	+1.4	211,620	224,111	+5.9
Iron and steel.....	133	80	½ month.	111,261	116,260	+4.5	3,797,463	4,112,076	+8.3

Comparing December, 1915, with the month immediately preceding, a material advance is seen. Each industry shows an increase in the number of persons employed, and each industry, except cotton goods, shows an increase in the earnings of its employees. November figures were not asked for in the silk and woolen industries.

COMPARISON OF EMPLOYMENT IN IDENTICAL ESTABLISHMENTS IN DECEMBER, 1914, AND DECEMBER, 1915.

Industry.	Estab- lish- ments to which in- quiries were sent.	Estab- lish- ments report- ing.	Period of pay roll.	Employees.			Earnings.		
				Number on pay roll in—		Per cent of increase (+) or de- crease (-).	Amount of pay roll in—		Per cent of increase (+) or de- crease (-).
				Decem- ber, 1914.	Decem- ber, 1915.		Decem- ber, 1914.	Decem- ber, 1915.	
Boots and shoes.....	88	59	1 week..	39,662	44,552	+12.3	\$456,654	\$569,522	+24.7
Cotton goods.....	91	54	...do.....	42,178	43,111	+2.2	325,501	341,808	+5.0
Cotton finishing.....	20	8	...do.....	6,984	7,680	+10.0	68,463	85,573	+25.0
Hosiery and underwear	82	42	...do.....	21,827	23,581	+8.0	178,199	222,980	+25.1
Iron and steel.....	133	89	1/2 month.	90,662	123,257	+36.0	2,502,766	4,307,821	+72.1
Silk.....	62	31	2 weeks.	17,307	18,151	+3.7	310,137	385,575	+24.3
Woolen.....	51	14	2 weeks.	6,452	7,196	+11.5	62,637	77,666	+24.0

Reports are received for different lengths of pay rolls from different establishments. In order that each establishment may have a proper weight in the aggregate, pay rolls are reduced to an approximately common basis, the one most frequently reported. Thus a majority of the iron and steel pay rolls are for a half month. Hence in a very few one-month rolls the amount of earnings is divided by two, and in a few one-week pay rolls the amount is multiplied by two. The two-weeks' pay rolls are counted as a half month. The pay rolls of each establishment being of the same length in the two different months compared, the proportion for the two months is preserved. The number of employees is used as reported, regardless of the length of the pay-roll period. This breaks very slightly the comparability of the figures for different establishments because of the increase in the labor turnover with the increase in the length of the pay-roll period.

The second table shows a most pronounced increase in December, 1915, as compared with December, 1914. More men are employed in each industry, the increase varying from 2.2 per cent in cotton goods to 36 per cent in the iron and steel industry. Aggregate pay rolls increased to a far greater extent, from 5 per cent in the cotton industry to 72.1 per cent in iron and steel. Many establishments reported short-time work in December, 1914, but nearly all were on full time in December, 1915.

In addition to the data presented in the above table for number of employees on the pay roll, 87 establishments in the iron and steel industry returned 120,676 employees as actually working on the last full day of the pay period reported for in December, 1915, as against 85,842 for the reported pay-roll period in December, 1914, an increase of 40.6 per cent.

STATE AND MUNICIPAL PUBLIC EMPLOYMENT BUREAUS.

In the preceding issue of the MONTHLY REVIEW the bureau began the publication of reports of the operation of State and municipal public employment bureaus in the different States. In that issue facts were presented covering the work of State and city bureaus in various cities of six States for the month of November, and for the bureau at Richmond, Va., for 11 months, and for Fort Worth, Tex., for December, 1914, and each month of the year 1915. In continuation of that information the returns from State employment bureaus in 11 States and municipal employment bureaus in 7 States are here presented. The report includes returns for the month of November from bureaus not included in the preceding publication that have reported those data since the publication of the last issue of the MONTHLY REVIEW, and for the month of December, 1915, for all bureaus that have furnished information for the month of December. The figures representing the work for the month of December, 1914, for such bureaus as were able to furnish that information are also presented for comparative purposes.

OPERATIONS OF FREE PUBLIC EMPLOYMENT OFFICES, 1914 AND 1915.

State and city.	Number of applications from employers.	Number of persons asked for by employers.	Number of persons applying for work.	Number of persons referred to positions.	Number of positions filled.
California (municipal):					
Berkeley—					
December, 1914.....	79	(²)	102	79	79
December, 1915.....	144	156	¹ 149	156	156
Sacramento, December, 1915.....	147	175	156	175	175
Total, December, 1915.....	291	331	¹ 305	331	331
Colorado (State):					
Colorado Springs, November, 1915.....	54	516	642	490	490
Denver, No. 1, November, 1915.....	26	219	311	219	219
Denver, No. 2, November, 1915.....	21	136	427	113	113
Pueblo, November, 1915.....	15	215	221	213	213
Total.....	116	1,086	1,601	1,035	1,035
Connecticut (State):					
Bridgeport—					
December, 1914.....	(²)	155	270	(²)	145
December, 1915.....	(²)	760	954	(²)	679
Hartford—					
December, 1914.....	(²)	159	316	(²)	134
December, 1915.....	(²)	466	673	(²)	347
New Haven—					
December, 1914.....	(²)	132	258	(²)	100
December, 1915.....	(²)	428	364	(²)	302
Norwich—					
December, 1914.....	(²)	44	61	(²)	36
December, 1915.....	(²)	180	241	(²)	171
Waterbury—					
December, 1914.....	(²)	127	182	(²)	103
December, 1915.....	(²)	183	189	(²)	110
Total—					
December, 1914.....	(²)	617	1,067	(²)	518
December, 1915.....	(²)	2,017	2,421	(²)	1,609

¹ Also 511 renewals.² Not reported.

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OPERATIONS OF FREE PUBLIC EMPLOYMENT OFFICES, 1914 AND 1915—Continued.

State and city.	Number of applications from employers.	Number of persons asked for by employers.	Number of persons applying for work.	Number of persons referred to positions.	Number of positions filled.
Kansas (State), Topeka:					
December, 1914.....	6	6	112	6	4
December, 1915.....	22	72	132	72	65
Kentucky (municipal): Louisville, December, 1915..	(¹)	129	347	109	60
Massachusetts (State), 1914-1915:					
Boston—					
December, 1914.....	685	828	467	1,383	723
December, 1915.....	1,402	1,605	935	2,672	1,267
Fall River—					
December, 1914.....	95	119	35	103	89
December, 1915.....	107	111	18	94	83
Springfield—					
December, 1914.....	283	331	117	407	267
December, 1915.....	620	786	145	809	624
Worcester—					
December, 1914.....	300	299	432	516	240
December, 1915.....	594	720	481	983	515
Total—					
December, 1914.....	1,325	1,577	1,051	2,409	1,309
December, 1915.....	2,723	3,312	1,519	4,618	2,489
Michigan (State):					
Detroit, November, 1915.....	(²)	3,907	(³)	(⁴)	3,907
Flint, November, 1915.....	(²)	509	(³)	(⁴)	509
Grand Rapids, November, 1915.....	(²)	844	(³)	(⁴)	844
Jackson, November, 1915.....	(²)	598	(³)	(⁴)	598
Kalamazoo, November, 1915.....	(²)	372	(³)	(⁴)	372
Saginaw, November, 1915.....	(²)	771	(³)	(⁴)	771
Total.....	(²)	7,001	(³)	(⁴)	7,001
Minnesota (State):					
Duluth—					
December, 1914.....	(²)	(²)	(³)	(⁴)	454
December, 1915.....	(²)	(²)	(³)	(⁴)	618
Minneapolis—					
December, 1914.....	(²)	(²)	(³)	(⁴)	894
December, 1915.....	(²)	(²)	(³)	(⁴)	1,211
St. Paul—					
December, 1914.....	(²)	(²)	(³)	(⁴)	495
December, 1915.....	(²)	(²)	(³)	(⁴)	756
Total—					
December, 1914.....	(²)	(²)	(³)	(⁴)	1,843
December, 1915.....	(²)	(²)	(³)	(⁴)	2,585
Missouri (State):					
Kansas City—					
December, 1914.....	(²)	135	242	(³)	131
December, 1915.....	(²)	149	185	(³)	132
St. Louis—					
December, 1914.....	(²)	141	580	(³)	122
December, 1915.....	(²)	351	536	(³)	312
St. Joseph—					
December, 1914.....	(²)	464	488	(³)	454
December, 1915.....	(²)	659	620	(³)	615
Total—					
December, 1914.....	(²)	740	1,310	(³)	707
December, 1915.....	(²)	1,159	1,241	(³)	1,059
Montana (municipal): Butte, December, 1915.....	405	(²)	635	405	330
New Jersey (municipal): Newark, November, 1915..	1,322	1,662	695	(³)	1,369
New York (State), December, 1915:					
Albany.....	278	416	547	371	312
Buffalo.....	440	710	679	836	539
New York City (Brooklyn).....	782	1,410	1,337	1,506	787
Rochester.....	562	894	644	989	604
Syracuse.....	443	572	501	596	442
Total.....	2,505	4,002	3,708	4,498	2,684

¹ Also 3 renewals.
² Also 14 renewals.
³ Not reported.
⁴ Also 1,186 renewals.

⁵ Number who were registered.
⁶ Number of offers of positions.
⁷ Also 229 renewals.
⁸ Also 219 renewals.

⁹ Also 302 renewals.
¹⁰ Also 269 renewals.
¹¹ Also 147 renewals.
¹² Also 1,366 renewals.

OPERATIONS OF FREE PUBLIC EMPLOYMENT OFFICES, 1914 AND 1915—Concluded.

State and city.	Number of applications from employers.	Number of persons asked for by employers.	Number of persons applying for work.	Number of persons referred to positions.	Number of positions filled.
Ohio (State), December, 1915:					
Akron.....	(1)	1,179	3,104	1,160	890
Cincinnati.....	(1)	1,112	5,180	1,041	780
Cleveland.....	(1)	5,231	9,017	3,940	3,277
Columbus.....	(1)	1,476	3,499	1,447	1,227
Dayton.....	(1)	946	2,073	823	754
Toledo.....	(1)	1,887	4,261	1,871	1,652
Youngstown.....	(1)	1,376	2,159	1,043	815
Total.....	(1)	13,206	29,283	11,265	9,895
Oklahoma (State), December, 1915:					
Enid.....	(1)	76	112	(1)	68
Muskogee.....	(1)	222	170	(1)	143
Oklahoma City.....	(1)	243	303	(1)	196
Tulsa.....	(1)	238	217	(1)	209
Total.....	(1)	779	802	(1)	616
Rhode Island (State):					
Providence—					
December, 1914.....	67	78	450	78	78
December, 1915.....	181	209	1,860	989	909
Texas (municipal):					
Dallas—					
December, 1914.....	90	174	1,186	220	174
December, 1915.....	96	132	1,800	199	132
Fort Worth, December, 1915.....	120	167	2,288	162	151
Total December, 1915.....	225	299	2,368	352	283
Virginia (municipal): Richmond, December, 1915.....	211	643	1,542	362	176
Washington (municipal):					
Seattle, November, 1915.....	971	1,406	(1)	1,406	1,406
Spokane, November, 1915.....	(1)	(1)	(1)	841	744
Tacoma, November, 1915.....	229	312	(1)	350	312
Total.....	13,200	13,718	(1)	2,597	2,462

¹ Not reported.² Also 2,268 renewals.³ Also 3,476 renewals.⁴ Also 6,892 renewals.⁵ Also 2,097 renewals.⁶ Also 1,362 renewals.⁷ Also 2,849 renewals.⁸ Also 1,388 renewals.⁹ Also 20,599 renewals.¹⁰ Also 129 renewals.¹¹ Also 26 renewals.¹² Also 16 renewals.¹³ Not including returns for Spokane.

WORKMEN'S COMPENSATION LEGISLATION OF 1914 AND 1915.

If proof were needed of the rapid growth of the idea of compensation of workmen for injuries received in the course of employment as a substitute for the old liability acts, it would be found in Bulletin No. 185 of the Bureau of Labor Statistics. The bulletin presents the legislation for the years 1914 and 1915, together with amendments to a number of earlier laws, which in some cases are so extensive as to necessitate the reprinting of the entire law. This bulletin is in effect a supplement to Bulletin No. 126, issued two years ago as a complete compilation up to that date of existing legislation in this field.

The legislation of the year 1914 included three States—Kentucky, Louisiana, and Maryland. One of these laws, that of Kentucky, was declared unconstitutional before it came into operation. That of Maryland superseded an earlier statute reported as unworkable.

The new laws of 1915 cover eight States—Colorado, Indiana, Maine, Montana, Oklahoma, Pennsylvania, Vermont, and Wyoming—besides the Territories of Alaska and Hawaii. The legislation of 1914 included also a presidential order providing a compensation system for employees of the Panama Canal and the Panama Railroad, while that of the current year includes a similar order extending the Federal compensation act of 1908 to workmen engaged on or about the Government railway in Alaska. With the legislation of these two years 31 States and the Territories of Alaska and Hawaii now have compensation laws. A Federal statute covers also about one-fourth of the civilian employees of the United States. All of this legislation has been enacted since 1908, and practically all of the existing legislation in the States since 1910.

Of the new laws of 1914 and 1915, one, that of Wyoming, must be classed as a compulsory insurance law, while those of Maryland and Oklahoma are compulsory compensation laws. In the other States, 8 in number, the law permits the employer to elect or reject the compensation act. In case he rejects it, however, he is deprived of the customary defenses under the liability laws.

Some of the newer laws have certain features which are of special interest and worthy of mention. The Oklahoma statute, for example, applies only to cases of nonfatal accidents, while in Wyoming all awards, whether for death or disability, are in the form of lump-sum payments arbitrarily fixed by the statute without regard to the earning capacity of the injured person. The Alaska statute also provides for lump-sum payments except for temporary disability. Legislation elsewhere has very generally provided for periodical payments graduated according to wage loss, and this method is favored by practically all authorities.

Of the new laws of 1914 and 1915, the Wyoming act is the least liberal, the compensation for death being limited to funeral expenses of \$50 and a maximum death benefit of \$2,000. In comparison with this the Colorado statute provides for a maximum of \$2,500, while the maximum of the Alaska statute is \$6,000. In cases of temporary disability the Colorado law is more illiberal than any other, as it provides for no compensation for disabilities not extending beyond three weeks. In the statutes of other States the waiting time has usually been fixed at one or two weeks, no State except Colorado fixing a longer period.

In the legislation of 1914 and 1915 special boards or commissions for administration continue to be preferred, the laws of Alaska and Wyoming being the only ones enacted during 1915 which do not have this provision. In Maine, Maryland, Oklahoma, and Vermont the administrative authorities are given no powers other than those

relating to the administration of the compensation acts. In Hawaii county boards with functions restricted to the compensation act are provided for. In Louisiana the law is administered by the courts.

The prevention of accidents, as well as compensation, is provided for in a number of the new laws. Thus, the Industrial Commission of Colorado is charged not only with the administration of the compensation act, but also with the duty of factory and mine inspection, the enforcement of woman and child labor laws, and safety laws generally. Corresponding provisions are found also in the laws of Indiana and Montana.

The bulletin contains a comparative analysis of existing workmen's compensation laws in the form of a large folding chart. Notwithstanding the efforts which have been made to bring about uniformity in compensation legislation, a comparison of the laws of the 31 States which have thus far enacted compensation laws shows the widest diversity in the methods and amounts of compensation payments and the scope of the various laws. Amending legislation is in general of a liberalizing character, either including new disabilities, as occupational diseases, or increasing the disability allowances, or introducing other details.

Promise of future progress in compensation legislation is found in the provision for a commission in Utah for the purpose of drafting a compensation bill and in the amendments to the constitutions of Pennsylvania and Wyoming and in the proposed amendment of the constitution of Oklahoma, the purpose of which is to permit the enactment of more inclusive and effective laws than is believed possible under the present laws of the States.

LABOR LEGISLATION OF 1915.

The annual summary of labor legislation in the United States, published by the Bureau of Labor Statistics, which appears as its Bulletin No. 186, covers the activities in this field during 1915 of 45 States, 2 Territories, and the Federal Congress. With three exceptions—Kentucky, Maryland, and Mississippi—every State in the Union held a legislative session, regular or extra, in 1915, and of these all but two—Louisiana and Virginia—enacted laws of special interest to labor. The bureau's report reproduces the text of all these labor laws and presents a concise review of each class of legislation. The workmen's compensation laws are omitted, having been published separately in the bureau's recently issued Bulletin No. 185.

Aside from the enactment of workmen's compensation laws, perhaps the most significant feature of the legislation of the year is the growth of the industrial commission plan, uniting in one authority the administration of workmen's compensation, factory inspection,

and other labor laws. This plan was adopted in 1915 in Colorado, Indiana, Montana, Nevada, and New York.

Especially notable in the legislation of the year was the attention given to the subject of unemployment and public employment offices. In Illinois a commission on unemployment, consisting of three representatives of labor, three of employers, and three of the public, was established to report at the next legislative session. In connection with the State employment offices a general advisory board was established to investigate and deal with unemployment. California and Nevada passed resolutions calling for investigation of unemployment. In Idaho emergency employment is to be provided by county boards of commissioners for unemployed citizens of the United States who have been for six months residents of the State. Employment is to be on the highways at rates to be fixed by the county boards, not more than 60 days' work of this kind to be furnished any person within one year. One-half of the expense is to be borne by the State, and refusal to perform the work assigned debars one from this form of relief for the period of one year.

Public employment offices were provided for in California, Idaho, Iowa, New Jersey, and Pennsylvania, and provision was made for the extension of the system of public employment offices in Illinois, Michigan, and Oklahoma. The licensing and supervision of private employment offices were provided for in seven States—Colorado, Nebraska, Oregon, Pennsylvania, Rhode Island, Texas, and Wisconsin—while Idaho prohibited the maintenance of private employment agencies operated for profit.

Laws relating to the employment of women and children were quite as numerous as in preceding years. Notable among these were the minimum-wage laws enacted by Arkansas and Kansas, making 11 States which now have such legislation. California, Massachusetts, and Washington passed amendments to their minimum-wage laws, not, however, involving any important modifications. In Idaho a commission to investigate the subject of minimum-wage legislation was provided for.

Considerable progress was made in the field of child-labor legislation, notably in the States of Arkansas and Pennsylvania. In the latter State the law requires eight hours per week of school attendance for children under the age of 16, such attendance to be between the hours of 8 a. m. and 5 p. m.

In the field of safety provisions the most detailed enactments were those formulated by the Industrial Commission of Wisconsin and the Industrial Boards of New York and Pennsylvania. The rules and orders of these bodies indicated an intimate knowledge of the conditions to be met which it is impossible for an ordinary legislative

committee to procure. The worker's welfare is looked after in less usual ways by new enactments in some States regulating the sanitary conditions in labor camps, railway labor camps, and the like.

Laws to regulate the giving of clearance cards or statements of cause of discharge were enacted in three States—California, Indiana, and Oregon—while in two States—California and Nevada—the right is given the employee by law to hear and answer charges brought by “spotters” before being discharged on their evidence.

Other important laws enacted during 1915 were the seamen's act, which made numerous provisions for safety and abolished arrest and imprisonment for desertion; the Alaska and Arizona old-age pension laws; and the California act providing for the appointment of a commission to report on the subject of social insurance.

VOCATIONAL EDUCATION SURVEY OF RICHMOND, VA.

How to make the work of the public schools more practically useful in preparing children for vocations which they wish to follow is a question which many cities are trying to answer. While the question of vocational education is one fundamentally much broader than the temporary need of any locality or industry, each city must adapt its plan to the social, industrial, and educational conditions of the community. The way one city has sought to solve this problem is shown in a report on a vocational education survey of Richmond, Va., just published by the Bureau of Labor Statistics as its Bulletin No. 162. The survey here described was made under the auspices of a survey committee organized by the National Society for the Promotion of Industrial Education, and having the cooperation of the United States Bureau of Labor Statistics, the United States Bureau of Education, the Russell Sage Foundation, and the school authorities and citizens of Richmond.

The chief purpose of this survey was to secure for Richmond an accurate knowledge of the industrial and school facts and conditions necessary in developing a plan of vocational education to serve the practical needs of children preparing for the various vocations and of employers and employees. A special object of the survey was to secure the cooperation of national and local public and private agencies in the making of a survey which might be useful as a model for studies in other localities where the need of a better program of vocational education was pressing.

The survey included a study of the public schools of Richmond, with special attention to the present status of vocational and technical education and the fields of employment in Richmond, and a

study and analysis of the occupations of men in the printing, building, and metal trades, and of women in retail stores and in the tobacco industry. The analysis of occupations was from the standpoint of both employer and employee, and was designed especially to ascertain in detail for each occupation the conditions of employment, what the occupation has to offer the workers, what the worker needs to equip him properly for the trade, what the industry gives in the way of training, the more common deficiencies of workers as seen by the employer and by the workers themselves, and in detail the specific training which in the judgment of the employer and worker the school and the trade ought to give.

A most important and successful part of the method of the survey was in securing the active interest and assistance of both employers and employees throughout the work, with the result that it became necessary to outline courses and organize classes several months before the completion of the survey.

The recommendations of the survey committee deal with the problem of financing vocational education in Richmond, compulsory attendance, types of schools and courses of study for boys and men, and for girls and women; prevocational education for boys, and the place of private institutions receiving city moneys in the general plan for vocational education. The survey committee found a definite need for the offering of educational facilities for men and boys already employed. It was evident that the supply of efficient journeymen was inadequate, that the amount of systematic instruction given in a shop was small, and that the amount of apprenticeship training was limited. The men themselves desired further educational advantages and were personally interested in trade education. Many workers had taken courses at their own expense and since leaving the regular school. The majority of these workers had taken courses bearing directly upon their trades. The survey committee recommended the organization of evening and part-time schools and courses for boys and men already employed, and outlined general and industrial courses for the trades which the survey had covered.

The survey committee were of the opinion that the white women and girls of Richmond who were employed in manufacturing and mechanical pursuits were engaged in operations which can be learned more quickly in the factory than in the school, largely because the amount of technical training and trade information necessary is too meager to warrant the expenditure of public money for equipment and instruction. There was need of department store and salesmanship training through part-time and continuation classes. Steps were taken to meet this need before the completion of the survey.

The conclusion was reached that there was no need or possibility of a girl's trade school for Richmond. A demand, however, was found to exist for courses of training in the practical arts as a part of the general education of girls over 13 years of age. Instruction in home economics, except in specialized courses planned and followed for the purpose of earning a livelihood, in the committee's opinion, should not be regarded as vocational education for wage earning, but as a valuable and necessary part of general education to which every girl is entitled as a part of her adequate preparation for living.

SHOEMAKING AS A TRADE FOR WOMEN IN MASSACHUSETTS.

A study of the boot and shoe industry in Massachusetts as a vocation for women is the subject of Bulletin No. 180, issued by the Bureau of Labor Statistics. The object of the study was to gain first-hand knowledge in regard to certain aspects of an occupation long held to be exceptionally desirable for wage-earning women. Four important shoe centers in Massachusetts were chosen for the inquiry, namely, Boston and Chelsea, Brockton and nearby towns, Lynn and Beverly, and Marlboro.

The importance of the boot and shoe industry in Massachusetts is indicated by the fact that in 1911 it employed an average number of 80,000 workers, or nearly half the number in the industry in the entire country. Of this number 35 per cent, or nearly 28,000, were women and girls, a greater number than is employed at any other factory trade except the textile industries.

The method of the study included visits to 80 factories in the 4 localities selected; rates of pay and earnings were studied, based on the pay rolls of 18 factories and over 4,400 women shoe operatives. Information in regard to the physical conditions under which the women were working and living was in all cases based upon personal inspections.

The majority of women workers were employed in the stitching room, a smaller number in the packing room, while in every room table work is done by women and minors. Outside of these occupations men performed all of the operations in the factory. Massachusetts women have not yet entered the cutting rooms, except at skiving. The packing-room work, formerly done by men, is now almost completely in the hands of women. Women are also found at assembling machines and doing eyeleting and buttonhole making.

To some extent men have recently taken up some of the occupations formerly exclusively assigned to women. In the stitching room, vamping, usually the best-paid process, is now frequently done

by men of some of the foreign races. The managers claim that the men hold out longer than women on heavy work. Furthermore, the law permits them to work longer hours than women, and in a rush season the employer regards this as an advantage.

As compared with other Massachusetts industries, the boot and shoe industry pays nearly the highest annual as well as the highest weekly wage. When adult women alone are considered, the average weekly wage is about 50 cents higher than that paid in the next highest, the electrical machinery industry. In the week of maximum employment more than 40 per cent of the women in the boot and shoe industry earned \$10 and over, a proportion nearly twice that shown for any other industry.

The study of pay rolls in this investigation showed wide differences in the earnings in the several localities, the proportion earning less than \$8 in the week when the greatest number were employed, varying from 24 per cent in Brockton to 42 per cent in Lynn, while the proportions earning over \$10 a week varied from 34 per cent in Marlboro to 54 per cent in Brockton.

According to Massachusetts statistics for 1911, the seasonal fluctuations in shoe factories are greater than in any other industry except the men's and women's clothing industries. While conditions change somewhat from year to year, it may be stated generally that the late fall and early winter months show the high tide of employment, with some stability through the winter, a rapid ebb in the early spring, partial recovery in the late summer, and irregularity in the early fall. The investigation indicates that the seasonal fluctuations are largely due to the general adoption of the order system, a system which manufacturers regard as necessary because of the rapid changes in fashion and the uncertainty in regard to the styles which will be used.

Some indication of the instability of the working force among women shoe workers is given by the fact that the number of women employed in the week of maximum employment is only 61 per cent of the total number employed during the year, as shown by the pay rolls.

An attempt to ascertain the proportion of women workers who were steadily employed showed that in 12 factories 32 per cent of the women worked 46 weeks or more during the year, the proportion reaching 59 per cent in a Beverly factory and 85 per cent in one Marlboro factory.

Of the women who worked 46 weeks or more, all adult, experienced and steady workers, three-fifths earned less than \$500 a year, and not far from one-half earned only \$450 or less. Unquestionably, however, these earnings exceed those of any other large body of factory workers.

In summing up the results of the study as to earnings, the bulletin notes that three points stand out prominently: The fluctuations in the industry, which debar many of the workers from steady employment; factory unemployment or temporary lack of work for those who nominally are steadily employed; and, partly as a consequence of this irregularity of work, the low weekly wage even of steady and experienced workers when earnings are distributed over the year.

THE COST OF LIVING OF WORKING WOMEN IN OHIO.¹

Two considerations prompted the department of investigation and statistics of the Ohio Industrial Commission to make a careful and detailed study of the cost of living of working women in that State: (1) Public interest in the question as to what effect, if any, the increase in the cost of living has had on the standards of living of wage earners; and (2) the possibility that in the near future an effort will be made to provide a legal minimum wage, at least for women employed in Ohio. Owing to the limited force of special agents and field workers at the command of the department the experiment was made of attempting to secure a number of intelligent volunteer workers, each of whom would undertake the task of finding wage-earning girls and women of the character desired who would agree to report their expenditures for one or two months in the manner designated by the department. These volunteer workers were expected to supervise the work by visiting the wage earners at frequent intervals and advising them as to the correct method of entering the accounts. For each girl and woman tentatively selected by these volunteers a card of personal questions was filled out and forwarded to the department, and if the information proved that the wage earner met the conditions required, each worker was furnished with an account book containing sufficient pages for the recording of two months' expenditures. At the close of the two-month period (longer in some cases) a summary card was made out showing the expenditures for a full year based on the expenditures as shown in the account book.

Much difficulty was encountered in collecting the information desired. Few wage-earning women keep accurate accounts of their incomes and expenditures, and when persuaded to do so for a limited period they did not appreciate the necessity of strict accuracy. Again, few of them persisted, even for the comparatively short time required to enable conclusions to be drawn as to the typical character of their expenses, and the books of many of those who did persist

¹ Cost of living of working women in Ohio. Industrial Commission, department of investigation and statistics. Report No. 14. Columbus, 1915. 256 pp.

were so faulty that they had to be rejected. Only 208 women returned detailed accounts which they had kept for a period of from 4 to 10 weeks, and only 164 women reported annual budgets.

The inquiry included women 18 years of age and over living away from home, and with a total income from all sources not in excess of an average of \$12 per week, or \$624 per year. Except in a very few cases all were self-supporting. Those following employments in which rooms, meals, or a portion of such accommodations were furnished in addition to wages were excluded, as were also those living at home and paying for board and room. Of the 164 reporting annual budgets, 40 were 18 years of age but under 21, 50 were 21 but under 25, 36 were 25 but under 30, and 34 were 30 or over. The average annual income of these 164 women was \$430.17 (\$8.27 per week), and the average annual earnings was \$417.37 (\$8.03 per week), indicating that some had other sources of income than their wages. Sixty-one reported an average annual income aside from earnings of \$34.43, or 66 cents per week. More than one-half of the budgets were from women earning less than \$8 per week. Of the 208 reporting detailed daily accounts, the average weekly earnings were \$8.12 and the average weekly total income was \$8.24. The average annual incomes of the 164 workers whose annual budgets were used in the final tabulation and the average weekly incomes of the 208 women and girls who furnished daily accounts were distributed as follows:

AVERAGE ANNUAL AND WEEKLY INCOME, BY INCOME GROUPS, OF 164 WORKERS FURNISHING ANNUAL BUDGETS AND 208 WORKERS FURNISHING DAILY ACCOUNTS.

Income group.	Number of budgets or accounts.	Per cent of total.	Average income for the group.
Annual income:			
Less than \$312 (less than \$6 per week).....	17	10.4	\$289.00
\$312 but under \$364 (\$6 but less than \$7 per week).....	28	17.1	336.82
\$364 but under \$416 (\$7 but less than \$8 per week).....	28	17.1	389.48
\$416 but under \$468 (\$8 but less than \$9 per week).....	34	20.7	439.38
\$468 but under \$520 (\$9 but less than \$10 per week).....	23	14.0	485.42
\$520 but under \$572 (\$10 but less than \$11 per week).....	19	11.6	534.11
\$572 to \$624, inclusive (\$11 to \$12, inclusive, per week).....	15	9.1	603.16
Total.....	164	100.0	430.17
Weekly income:			
Less than \$6.....	22	10.6	4.96
\$6 but under \$7.....	29	13.9	6.37
\$7 but under \$8.....	43	20.7	7.44
\$8 but under \$9.....	44	21.2	8.33
\$9 but under \$10.....	24	11.5	9.32
\$10 but under \$11.....	24	11.5	10.24
\$11 and over.....	¹ 22	10.6	11.95
Total.....	208	100.0	8.24

¹ 6 of the 22 earning \$11 per week or over averaged slightly more than \$12 per week for the account period, but in every case the annual income was \$624 or less.

The total expenditures of the 164 women reporting annual budgets averaged \$413.06, or \$7.94 per week, distributed as follows:

Food and shelter.....	\$3. 96
Clothing.....	1. 94
Laundry.....	. 12
Car fare to and from work.....	. 20
Health.....	. 25
Recreation and amusements.....	. 34
Fruit, candy, and soda.....	. 08
Education.....	. 09
Church and charity.....	. 11
Stamps and stationery.....	. 05
Association dues.....	. 02
Insurance.....	. 10
Gifts.....	. 31
Incidentals.....	. 37
Total.....	7. 94

The total expenditures of the 208 women who kept daily accounts averaged \$8.28 per week. The expenditures of these two groups are considered from three standpoints: (1) Income received, (2) mode of living, those boarding and lodging and those doing light housekeeping being given separately, and (3) occupations of the workers. It was found that the average annual expenditure of the 164 reporting budgets was highest among those receiving \$312 or less per year, being 101.3 per cent¹ of the average annual income. It was also disclosed that of those reporting daily accounts the highest average weekly expenditure was among those receiving an average weekly income of \$7 to \$8, the per cent being 105.9.¹ In both groups those doing light housekeeping spent a smaller percentage of their income than those boarding and lodging. Similarly, in both groups those working in factories spent less in proportion to their income than those working in offices or as saleswomen or in other occupations.

The general summary of 164 annual budgets is here presented according to mode of living and occupations.

¹ This excess is due to the fact that almost three-fourths of the account weeks fell in September, October, and November, when fall and winter clothing were being bought.

GENERAL SUMMARY OF 164 ANNUAL BUDGETS, BY MODE OF LIVING AND OCCUPATION GROUPS.

Average expenditure for—	Mode of living.					
	Boarding and lodging.		Light house-keeping.		Mixed boarding and lodging.	
	Average.	Per cent.	Average.	Per cent.	Average.	Per cent.
Food and shelter.....	\$210.06	49.9	\$187.10	48.1	\$226.04	54.5
Clothing.....	105.39	25.1	90.31	23.2	93.12	22.4
Laundry.....	6.50	1.6	6.28	1.6	3.42	.8
Car fare to and from work.....	11.46	2.7	7.03	1.8	13.71	3.3
Health.....	13.11	3.1	11.95	3.1	9.63	2.3
Recreation and amusement....	18.77	4.5	15.57	4.0	11.11	2.7
Fruit, candy, soda, etc.....	4.37	1.0	3.71	1.0	2.13	.5
Education.....	4.83	1.1	3.75	1.0	5.39	1.3
Church and charity.....	6.50	1.5	4.79	1.2	2.34	.6
Stamps and stationery.....	2.48	.6	2.81	.7	1.87	.5
Association dues.....	1.30	.3	1.29	.3	1.14	.3
Insurance.....	5.01	1.2	5.46	1.4	9.95	2.4
Gifts.....	16.46	3.9	15.43	4.0	12.74	3.1
Incidentals.....	14.37	3.4	33.14	8.6	22.48	5.4
Number of accounts.....	117		37		10	
Average earnings.....	\$423.54		\$405.06		\$390.78	
Average income.....	435.98		414.45		420.47	
Average total expenditures....	420.62		388.62		415.07	

Average expenditure for—	Occupation group.						All others.		All workers.	
	Factory workers.		Office employees.		Saleswomen.					
	Average.	Per cent.	Average.	Per cent.	Average.	Per cent.	Average.	Per cent.	Average.	Per cent.
Food and shelter.....	\$191.81	48.5	\$217.54	48.6	\$221.67	55.9	\$205.33	49.2	\$205.86	49.8
Clothing.....	98.81	25.0	108.47	24.2	92.91	23.4	103.70	24.9	101.24	24.5
Laundry.....	6.25	1.6	7.77	1.7	2.71	.7	7.39	1.8	6.26	1.5
Car fare to and from work.....	7.14	1.8	15.01	3.4	9.83	2.5	12.65	3.0	10.60	2.6
Health.....	13.68	3.5	13.37	3.0	9.02	2.3	12.49	3.0	12.63	3.1
Recreation and amusement....	17.35	4.4	21.09	4.7	12.68	3.2	17.30	4.1	17.58	4.3
Fruit, candy, soda, etc.....	4.16	1.1	4.57	1.0	3.47	.9	3.75	.9	4.09	1.0
Education.....	3.89	1.0	7.16	1.6	2.90	.7	3.98	1.0	4.62	1.1
Church and charity.....	5.89	1.5	7.15	1.6	4.83	1.2	4.71	1.1	5.86	1.4
Stamps and stationery.....	2.53	.6	2.45	.5	2.81	.7	2.33	.6	2.52	.6
Association dues.....	1.69	.4	.97	.2	.71	.2	1.38	.3	1.29	.3
Insurance.....	4.99	1.3	8.07	1.8	5.53	1.4	2.01	.5	5.41	1.3
Gifts.....	16.91	4.3	15.24	3.4	16.09	4.1	14.93	3.6	16.00	3.9
Incidentals.....	20.09	5.1	18.67	4.2	11.43	2.9	25.03	6.0	19.10	4.6
Number of accounts.....	66		44		27		27		164	
Average earnings.....	\$408.06		\$468.07		\$369.84		\$405.02		\$417.37	
Average income.....	417.69		472.71		400.63		420.91		430.17	
Average total expenditures....	395.19		447.53		396.59		416.98		413.06	

It was found that many girls resort to light housekeeping in order to reduce the expense of food, while others live with relatives or friends paying for such accommodations less than the commercial rates. Still others go without breakfast or other meals, a few instances being found where girls had tried to live on one meal a day.

The investigation showed that the average annual amount spent for clothing by those doing light housekeeping was somewhat below that spent by those boarding and lodging, but the requirements of occupation did not seem materially to affect the amount these

workers spent for this item. The clothing expenditure of the 164 workers is shown, in the order of importance, in the following table:

DISTRIBUTION OF EXPENDITURE FOR CLOTHING BY 164 WORKERS FURNISHING ANNUAL BUDGETS, SHOWING PER CENT.

Item.	Average annual expenditure.	Per cent of total expenditure.
Outer clothing.....	49.58	49.0
Shoes, rubbers, and shoe repairing	13.11	12.9
Hats.....	11.20	11.1
Underclothing.....	10.77	10.6
Miscellaneous clothing.....	5.11	5.0
Dressmaking, cleaning and repair of clothing.....	4.11	4.1
Hosiery.....	3.41	3.4
Gloves.....	2.33	2.3
Belts and neckwear.....	1.62	1.6
Total.....	101.24	100.0

One of the remarkable facts disclosed by the inquiry was that more than three-fourths of those reporting did all or a part of their laundry after the completion of their day's work or were indirectly helped by having their laundry done at less than the regular rate. In some cases, also, a part of the laundry work was included in the charge for board and room. Of the 164 women with an average annual income of \$430.17, 83, or 50.6 per cent, spent nothing for laundry, while \$12.86, or 24 cents per week, was the average amount spent for laundry by those reporting any expenditure at all for this item. Of the 208 who kept daily accounts of expenditures, having an average weekly income of \$8.24, 103, or 49 per cent, spent nothing for laundry, while 25 cents per week was the average amount spent for this item by those reporting such expenditure.

More than one-third (33.6 per cent) of the 164 furnishing annual budgets and 29.3 per cent of those keeping daily accounts spent nothing for car fare. About one-third of all the women reporting walked the year round, while slightly more than one-fourth (26.2 per cent) rode occasionally.

In the matter of health the report suggests that a surprising feature of the facts collected is the large number of women who spent nothing or comparatively small amounts for the care of their health, including the services of doctors, dentists, oculists and opticians, hospital bills, and expenditures for medicines, eyeglasses and medical appliances. Of the 164 reporting in regard to expenditure, more than one-half (53.6 per cent) spent less than \$10 for this item. One-eighth (12.8 per cent) spent nothing. The highest percentage (27.4) spent less than \$5 while 9.2 per cent spent \$30 or more.

Of the 164 reporting annual budgets, 11.6 per cent spent nothing for fruit, candy, sodas, etc., while approximately 9 cents a week was

the average spent by those reporting some expenditure along this line. Of the 208 who kept daily accounts 13.9 per cent spent nothing for these items, while the average spent by those reporting any expenditure was 11 cents per week.

Under education was included magazines, papers, books, and music lessons and other tuition. The report suggests that "the outstanding fact in this survey of expenditures is that 72.5 per cent of the women scheduled spent little or nothing during an entire year for educational purposes. Almost three-fourths of the workers included in this study spent an amount barely sufficient to cover the cost of a daily paper throughout the year and less than one-tenth of the women spent amounts that would admit of lessons in sewing, music, gymnastics, or in any other similar lines." One-fourth (25.6 per cent) of the women reporting annual budgets spent nothing for education, while the average spent by those reporting any expenditure was 11 cents a week. Of the 208 who kept daily accounts, 53.4 per cent spent nothing for education and the average spent by those reporting any expenditure was 18 cents a week.

RECENT REPORTS RELATING TO WORKMEN'S COMPENSATION AND INDUSTRIAL ACCIDENTS.

ILLINOIS.

The workmen's compensation law of Illinois provides for the determination of awards by committees of arbitration subject to review by a State industrial board, with appeals to courts. The board has recently issued a bulletin¹ containing its rulings on reviews and petitions for reviews, covering a period of two years. The lack of any synopsis or statement of the point decided in many instances, and of any index other than a simple list of parties detracts largely from the usefulness and availability of the work.

Among matters of interest noted is a ruling as to the status of a carpenter employed by a farmer to erect a building on his farm, a divided board holding that such employment was within the act, the dissenting opinion being based on the grounds that farming is not included under the provisions of the act, and that the employment of the carpenter was casual and not in the usual business of the employer. Where, however, a farmer employed a man to deliver a threshing machine to a repair shop, and he was killed while doing so, it was held that since his employer was a farmer, he was not within the act; the same view was taken of the operation of threshing

¹ Industrial Board of Illinois. Bulletin No. 1. Opinions in cases arising under the workmen's compensation act, decided by the Industrial Board of Illinois, from the date of its organization, July 1, 1913, to July 1, 1915. Springfield. 222 pp.

machines, of corn shellers and shredders, and of hay presses, though run by belts and pulleys.

A department store was held to be within the act by reason of "certain statutes and municipal ordinances regulating the use of machinery and appliances and the protection of the public therein," as was also a meat-distributing establishment, where there were elevators in the building, and a city ordinance regulated the safeguarding, etc., of elevators.

An owner of property contracting for the building of a barn thereon was held not to be within the provisions of section 31 of the act of 1913, which provides that every person undertaking to do or contracting with another to do any work coming under the act shall require all contractors for or under him to secure insurance for their employees, and upon failure to do so the original undertaker or contractor will himself be liable. The contractor for the erection of the building was held to be the principal contemplated by the act, and not the owner, who did not undertake by himself to erect the building.

In a case involving a claim on account of one employed by an express company as barn man, and not exposed to the special hazards of the business, it was held that under the act every employee of an employer electing to accept the provisions of the act was within its provisions, without regard to the special nature of his individual duties.

The question of the application of the compensation act to railroad employment arose in a case in which it was said that the employment of the injured man might be looked upon as either interstate or intrastate. It was ruled that there was Federal jurisdiction only where there was interstate traffic, interstate employment, and negligence, and that if there was doubt as to the existence of negligence on the part of the employer, the injured man might elect by which law he would ask for redress.¹ Compensation was allowed, and in a number of later cases the same principle was adopted.

In considering the force of the expression "course of employment," the board adopted the principle that where an employee is "at his usual place of employment at the usual time of day when he is expected and required to be there and an injury of any character is shown," a prima facie case is made out. In the particular instance, it appeared that the employee met his death while doing work other than that which he had just been directed by his foreman to do, and on a machine not commonly used for the purpose of his attempted undertaking, but these conditions were held insufficient to overcome the

¹ It may be noted that this ruling antedated by some months a decision of the court of appeals of New York of much the same effect. The supreme court of Illinois rejected this view in a case decided in June, 1915.

presumption in favor of the claimant under the above ruling. In another case of this kind it was held that a wagon washer who had repeatedly cranked automobiles at the request of the machinist, and frequently in the presence of the foreman and without objection from him, could not be deprived of benefits on account of an injury received while cranking an automobile, on the ground that such an act was outside the course of his employment.

So where a manufacturer of leather goods had a custom of sending one of his employees to his home to do some work about the house as those in charge of the employer's household might direct, it was held that the workman was not by this fact taken from under the act, though an employee in domestic service would not be included.

Where an employee was injured during a friendly scuffling and shoving in the line in front of a pay window, it was held that there had been no departure from the "course of employment," and the rule disallowing compensation for injuries received while engaging in "horse-play" was held not to apply.

In cases considering the degree of disability caused by specific injuries (for which there is a fixed scale of awards), it was ruled that a loss of 80 per cent of the vision of an eye deprived the injured man of its use for all practical purposes, and should be rated as a total loss of an eye under the act. The loss of all the fingers of a hand, leaving only the palm and thumb, was held to be a complete and permanent loss of the hand, while the loss of the first, second, and third fingers was compensated for by a payment for the aggregate of the periods for each finger. The foregoing injuries were to the left and right hands, respectively, of the injured man, and one member of the board held that the combined injuries made a case of complete, permanent disability, as had been decided by the committee of arbitration.

A question as to partial disability arose in a case in which the dislocation of a shoulder left, on recovery, a condition claimed by the injured man to be one of permanent total disability. The board found that the claimant possibly would lose a small per cent of the free use of the arm, but not the total use thereof; also that he had done work since the injury for which he received better pay than for the work he was doing when injured. He was found, however, to be permanently partially disabled for following his usual employment, and an award was made in his favor of \$2 per week for eight years from the date of the injury, his average monthly wages at that period having been \$40.

An allowance was made for temporary total disability due to hernia where the present condition was held to be one of aggravation of a state that had existed for some time, the employer offering the testi-

mony of physicians that the injury could not have been the result of an accident.

In a case in which blood poisoning followed a slight wound, and the patient apparently becoming delirious or insane in the night escaped to the street and was afterward found dead on a railroad track, it was ruled that the connection between the injury and death was sufficient to sustain an award of compensation, one commissioner dissenting.

Failure to accept treatment and follow the advice of the attending physician, resulting in a partial crippling of the hand, was held to bar a claim for compensation beyond the term allowed for the healing of the wound, the disability being regarded as due to the neglect of the employee to use proper means for recovery, rather than to the injury originally suffered.

The question of medical treatment was considered in a different aspect in a case in which claim was made for a physician's fee, treatment having been secured in addition to that furnished by the employer. The law provides for treatment during the first eight weeks after the injury, not over \$200 in amount. The board found the claim for further medical attendance reasonable, but refused one for attorney's fees as not being within the act.

The statute allows compensation for "serious and permanent disfigurement" of head, face, or hands, without requiring actual disability. An award was approved in a case where scars on the side and back of a man's head were of such a nature as to require a growth of hair at least three-fourths of an inch long to conceal them, the marks being regarded as of such a nature as possibly to subject the injured man to rejection when applying for employment for which he might be fitted. It was perhaps on the ground of disfigurement that a committee allowed compensation for the loss of two teeth—an award that was reversed by the board—the employer having provided for the teeth to be replaced. In another case, however, the board allowed compensation for a disfigurement that had not interfered with the injured man's opportunities of employment as stationary engineer, on the ground that if he should ever "desire to follow another occupation, the markings on his face would seriously impair his ability to procure such employment," and an allowance of \$10.50 per week for 35 weeks was accordingly granted.

The effect of the intoxication of a workman at the time of his death was passed upon in the case of a driver who had taken two drinks of whisky in a saloon at 7.30 a. m., and who was known to be in at least one other saloon before 11 a. m., at which hour he fell from his wagon and was run over by it and killed. The employer contended that the accident was due to intoxication, that the employee was loitering and not attending to his business, and that the

injury occurred, not as an accident, but as the result of physiological conditions not arising out of employment. The board ruled against these contentions, on the ground that the record did not disclose that the employee was violating any rule of the company by stopping and taking the drinks, or that he was a drinking man, or that he was on this occasion intoxicated in the common or ordinary sense. In the absence of evidence as to how the man came to fall from his wagon, the board declined to presume that it was due to his condition, "even though he was to some extent intoxicated," and made an award of the full death benefit.

Among cases entitled to compensation were those of a night watchman in a railroad yard, fatally shot by a man who was in the act of stealing coal; a fireman at a pumping station dying from cerebral hemorrhage after protracted exposure to an atmosphere rendered impure from the imperfect combustion of illuminating gas, carbon monoxide being found in his blood on autopsy; a miner who died after some hours' work in a poorly ventilated coal mine; a machinist whose hand and arm became numb, due to the jarring motion of the punch press on which he was employed, causing permanent partial disability; and a plumber's laborer affected by heat prostration.

The Illinois statute differs from most laws of its class in not fixing an age at which payments to children cease, and in providing that if one has contributed to the support of a child or other relatives named, within four years prior to his death, benefits may be claimed without reference to the legal obligation for support. Thus an injured workman, dying, left two sons, aged 19 and 21 years, respectively, ordinarily strong, healthy, and active, to whose support he had contributed from time to time in the amount of about \$150 per year. The father's wages had been \$28.60 per week, and an award of \$12 per week for 291 weeks and \$8 for one week was made by the committee of arbitration and approved by the board.

A workman who "at odd times" made contributions to the support of his father and mother, whom he was under a legal obligation to support, was held to be in a position warranting an award for the benefit of his parents as dependents; and in a case in which it was said that the decedent's only contributions to his mother were in the nature of holiday and birthday presents, the board ruled that in the absence of specific evidence as to what the contributions were for they would be presumed to be for support.

The parents of a workman who sent \$20 to his father in Italy within four or five years prior to his accidental death were held to be dependents within the act, the contention that nonresident aliens could not be beneficiaries under its provisions was rejected, and an award of full death benefits was made.

Balances of awards not accrued were held not to be recoverable by the estate where one in receipt of periodical payments dies before the end of the term from a cause in no wise connected with the compensated injury.

In its preface to the bulletin, the board indicates the difficulties under which it has labored in establishing the lines of construction of the act, suggesting the possibility of error in its own interpretation. The cases noted in the foregoing summary illustrate what appear to be the chief principles developed and fairly cover the points discussed. Their liberality from the point of view of the workingman is obvious, but there is an apparent inconsistency between an award of benefits based on disability affecting the capacity to work in the employment engaged in at the time of the injury, though not interfering with more remunerative employment, and one granting compensation on the basis of a disadvantageous disfigurement in view of a possible desire to make a change of employment.

IOWA.

The First Biennial Report of the Iowa Industrial Commission, for the period ending June 30, 1914, is a pamphlet of 50 pages, under date of September 15, 1914. The Iowa compensation law established an industrial commission July 4, 1913, but the compensation features did not come into effect until July 1, 1914.

Section 25 of the law makes it mandatory on the industrial commissioner to "recommend such changes in the law as he may deem necessary," and accordingly his first report is chiefly devoted to an advocacy of a State fund system of administering the compensation law.

Iowa's compensation law provides (subject to rejection in prescribed form) that an employer must provide for and pay compensation to an injured employee, irrespective of fault on his part, excepting intentional injury or injury due to intoxication. The employer is required to buy insurance of those authorized to do business in the State, but in case the insurance company fails, the employer is not relieved from responsibility.

Two principal evils attending the operation of the law are pointed out and discussed, namely, oppressive insurance premiums and loss of employment by partially disabled employees. As to oppressive premiums, it is stated that in the great coal industry of Iowa the basic rate generally charged by the insurance companies on each \$100 of pay roll is \$6.50, as compared with \$1.50 under the State fund plan in Ohio. This glaring contrast led to an inquiry to determine the fairness of the rate charged. "The results reached show the actual loss cost to be included in the following:

"Rate per \$100 pay roll.....	\$0.90
"Rate per employee per year.....	4.71
"Rate per ton coal mined.....	.011

"The naked risk is covered by a fraction over a cent a ton, while coal users would be called on to pay over seven times that, simply to meet the insurance cost to the operators."

As to loss of employment by partially disabled employees (known to the insurance interests as "impaired risks"), it is stated that before the new law and the new system of insurance had been in effect a month a large employer in eastern Iowa wrote to the industrial commissioner as follows: "We have three men in our employ at the power plant here that will not be accepted by the insurance companies. One of these men has but one eye, another has had a partial stroke of paralysis, and the third has a rupture. Now, these men are all married and have families, and if they are discharged they will be unable to procure employment elsewhere. All are good, faithful men, and I dislike very much to let them go, but unless there is some way in which we can be released of the extraordinary hazard, I must do so. Is there any way we can keep these men without increasing our liability? It seems unjust to me to let them go. None of the men referred to were injured in our service, but all are old employees."

Affirmative rejections by employers under the Iowa act, when compared with Minnesota, stand as 60 to 1. It is noted that the greater number of Iowa employers who have taken themselves out from under the compensation provisions have done so, not by direct action as the law provides, but by the indirect method of neglecting or refusing to insure. The number rejecting the act in this circuitous but significant manner can only be estimated, but a safe minimum puts it at 10,000 employers, with 40,000 workmen in their employ, practically one-third of all properly subject to the compensation act. The gravity of this situation is increased by the fact that the Iowa law goes beyond that of any State in the Union in subjecting the employers who go out from under it to drastic liability. It was generally believed by the framers of the act that it would be practically impossible for employers to reject the act. If they reject it, they not only lose the three great defenses of fellow servant, assumption of risk, and contributory negligence, but also have the presumption of risk created against them, the burden of proof being reversed.

In the opinion of the Iowa commission—

A collective fund administered by the State is the remedy for all these evils and inequalities. Such a system will make an end of excessively high rates; it will remove also the temptation to reject the act in order to raise the question of negligence; above all, it will take away the temptation to discharge partially incapacitated employees. The element of personal advantage from weeding out the partly incapacitated is very slight and inconsequential when it comes back in a liability diffused over a whole State, but will often be compulsory and unavoidable when narrowed down to the concentrated pressure of a higher or lower insurance rate in a stock company, mutual association, or the burden on an employer carrying his own risk. * * *

In other States where the policy of stock or mutual insurance has been allowed to take strong root it is now declared that the only course possible is for the struggle between stock company and mutual insurance to be fought out to a survival of the fittest. Such, for instance, is the solution looked forward to by the Massachusetts Industrial Commission. It means, however, that during a contest between the two forms of private insurance, which may last for many years, the loss of employment to the aged, the partly incapacitated, and those having families, which has developed, shall not only continue, but become more extended in character. As stock and mutual companies become engaged in more strenuous competition, they will demand that all so-called impaired risks be dropped from the pay rolls. Meanwhile, also, as between individuals, rates will be adjusted according to what the business will bear, rather than fairness, a few who are fortunately situated getting fair rates while neighbors and competitors are levied on for all they can stand.

The report concludes with an appendix of 24 pages, of which 9 are devoted to the Cherry, Ill., mine disaster of November 13, 1909; 5 pages contain an extract on Iowa industrial accidents from the 1914 report of the labor bureau; the remaining pages contain statistical tables showing comparative cost of workmen's insurance from the experience of certain States, Iowa mine accidents, etc.

MASSACHUSETTS.

The Industrial Accident Board of Massachusetts presents in its second volume of cases decided under the State compensation act¹ a selection of decisions of the committees of arbitration, of the board itself, and of the supreme judicial court of the State for the year July 1, 1913, to June 30, 1914. The basis on which the cases were chosen was the representative nature of those selected rather than any attempt to reproduce the entire proceedings in the field.

The law awards compensation for fixed periods during continuance of incapacity for work. It is held in a number of cases that the term of incapacity continues during the employee's inability to secure employment, even though he be physically able by reason of recovery to engage in some forms of remunerative employment. A striking case under this head was that in which a man 68 years of age, partially deaf and blind in one eye, suffered an injury to the kneecap so as to make walking difficult and disqualify him for any work except what he could do while seated. An award by the arbitrators taking into consideration the prospect at an early date of disability for any remunerative employment, and limiting the period of compensation to 104 weeks, was set aside by the industrial accident board, this action being approved by the supreme court, which ruled that though there was a measure of physical capacity for working and earning

¹ Industrial accident board. Report of cases under the workmen's compensation act determined by committees of arbitration, the industrial accident board, and the supreme judicial court. Vol. II. 894 pp. July 1, 1913, to June 30, 1914, inclusive. Boston, 1914.

money, his inability to secure such employment as he could do rendered his case one of total incapacity resulting from the injury. The award was for full benefits up to the time of its rendition, to be continued subject to revision if the employee is furnished or is able to obtain work which he is able to do. The inability to obtain work, however, must be due actually to the injury complained of. A workman declining to accept employment offered him or to make a real effort to do his customary work will not be entitled to further compensation; the same is true where an injured person refuses to undergo a simple operation which the insurer offers to have performed without cost to the employee, one of these cases being the removal of a stiffened finger which was deformed through infection so as to render it useless, and the other an operation for a radical cure of inguinal hernia.

The effect of an accident on a workman affected by forms of physical weakness was considered in a number of cases, one in which a man suffering from arterial sclerosis sustained a rupture of an artery while working in a constrained position, the accident board holding that he was entitled to compensation. This case was appealed to the supreme court, a decision not having been reported at the time of the publication of the volume in hand. In a case presenting a quite similar condition of things, however, the supreme court affirmed an award on account of the death of a man known to have suffered from valvular heart trouble, death having been brought about apparently by excitement incidental to the sinking of a vessel on which the workman was employed, together with unusual exertion in an attempt to save his personal belongings. Another point decided in this case was that such regard for his personal belongings, and effort put forth in connection therewith, were not unreasonable or such as to take the case out of the law as not being in the course of employment.

As indicated by the foregoing decisions, the act is construed not merely as allowing benefits for accidental injuries, but for injuries arising out of and in the course of employment, without reference to their accidental nature. This was more fully developed in a case in which a workman whose duties required him to inspect gas-producing furnaces at certain intervals, was compelled to inhale noxious gases. This affected the nerves of the eye so as to produce blindness; no traumatic condition was discovered or alleged, the operating cause affecting simply the nervous system, for which compensation was allowed. So also for eczema, produced by a liquid acid solution; fibroid tuberculosis, caused by inhaling particles of dust while grinding stone (sometimes called stone grinders' phthisis); ulcer, resulting from compulsory vaccination (appealed to supreme court); lead poisoning; lobar pneumonia, the fatal results of which were held to be due to a weakened condition following personal

injury; occupational neurosis, produced by rapid and continuous movements causing unusual strain on certain groups of muscles; insanity, resulting from a previously impaired nervous state, accelerated by suffering following infection and operations where the original injury was the blistering of the hand, etc.

There must, however, be a causal relation between the physical condition or injury and the employment. Thus, where a man subject to failure of mental powers due to a prior injury left his work place and became lost and fell into a swamp, death resulting from exposure, it was held that there was no proper connection between the death and the employment, the supreme court in this case reversing the industrial board; so also where bronchitis and intestinal tuberculosis developed, following a fall causing some injury to the arm and shoulder and soreness of the chest, it was ruled that the connection was not apparent so that compensation could be paid (appealed to supreme court); and so of a case of death from acute dilatation of the heart due to uræmic poisoning subsequent to an injury due to a fall some four months prior to the death.

A very large number of cases naturally require a determination as to whether or not they arose out of employment. The point was obviously under consideration in the case of the teamster who wandered away and was lost in a swamp, the consequent injury being held as not arising out of his employment; nor was a case included where an employee going from his place of work to his boarding place walked along the railroad track on which he was employed, and was killed, no contract being in evidence requiring the decedent to board at the place selected by him. Where employment, as of a cook on a lighter, requires the employee practically to live on the craft, he is constantly exposed to hazards arising out of his employment, and injuries resulting from his being on the vessel arise out of the employment; but an employee, not at the time at work, and injured in a part of the building where his duties did not require him to be, would not come within the provisions of the act. Compensation was allowed in a case in which a laborer was, by reason of the nature of his employment, exposed to severe cold, resulting in the freezing of his fingers, the evidence showing that the risk to which he was exposed by reason of his work and duties was materially greater than that of the ordinary outdoor worker on the same day (appealed to the supreme court).

Computation of wages was held to include tips and gratuities received by employees during the course of their employment where such tips are customary. Where one had not established a rate of wages for her own services, it was held permissible to determine a suitable rate by taking into account the wages of persons employed

in the same grade, at the same work, and by the same employer. An extension of this method appears in the case of a longshoreman, whose work is irregular and customarily for two or more employers in the course of a week. Evidence showing what was an average weekly wage was obtained from testimony of different employers and workmen of this class, and what is considered a fair average wage was determined.

Questions of dependency have been to some extent modified by amendments, the law as it now stands establishing a presumption in favor of a woman living apart from her husband for justifiable cause. Under the original act the presumption was against a wife living separate from her husband, and this view was applied to a case in which the wife and husband had separated, and the husband had promised to support his wife in the meantime. The accident board awarded compensation on account of the death of the husband, but this ruling the supreme court reversed on the ground that the parties were not "living together" within the intent of the act. A daughter capable of self-support was held to be dependent upon her father for whom she had come to keep house, surrendering her employment and living upon her father's earnings while caring for him in his advanced age. Where a minor son contributed all his earnings to the common fund, and was supported by his father out of such fund, it was held that the father was entitled to compensation as a partial dependent, the rate to be allowed to be determined on the total contribution of the son to the family fund without deduction for the estimated value of the board of the son. In a case in which a father was earning average weekly wages of \$14, permitting benefit payments of \$7 a week to dependents, an award was made dividing this sum between two dependent minor children for a fixed period. Before the expiration of this period one of the children died, and it was held that the unexpired term of payments for the deceased child should be completed, payments being made to his administrator for the benefit of the surviving dependent. Though a wife living apart from her husband may not be entitled to compensation, a dependent child living with its mother thus separated from her husband may be a beneficiary where the father has contributed to the child's support.

The statute provides for additional compensation in cases of specific injuries, chiefly maimings. Death benefits are payable for 300 weeks from the date of the accident (500 under the law as amended). In a case in which compensation based on disability was allowed, and also an award on account of maiming, the injured man subsequently died, and the contention was made that the amounts paid to him as additional compensation for the maiming should be deducted from the payments to be made to the widow. This conten-

tion was rejected, the ruling being made that the additional compensation for maiming was independent of the disability award, and in no way affected the widow's rights. In this connection may be noted a case in which a release had been signed by an injured employee with a view to recovering by suit from the third party responsible for the injury. The man died as a subsequent result of the injury, and the widow claimed compensation under the compensation act, which was allowed on the grounds that the rights accorded by this act for her benefit were not at the disposal of her husband by any agreement that he might make.

It would be impossible to present in the space available anything like a complete summary of the cases involving the foregoing principles, without regard to numerous other points illustrated in the rulings and opinions found in this volume. British opinions and rulings were frequently referred to and found applicable, but it is obvious that American experience, applying laws very different in form from the British statute, must develop along lines of its own marking out. A fair degree of liberality must be conceded in the construction of the act as it stood during the period covered, and with the liberalizing amendments which have been made since that date, it is clear that the substitution of the compensation idea for that of liability has accomplished great good both by way of relieving from the consequences of injury, and in the avoidance of the bitterness and strife which damage suits so frequently produced.

MONTANA.

The Montana workmen's compensation law became effective July 1, 1915, and a report covering three months of its operation was, under date of October 1, issued by the State industrial accident board.¹ The law is elective, and in its preparation advantage was taken of similar legislation in the other States having compensation laws. Recognizing the fact that accident prevention is the best protection and more satisfactory to the workmen than compensation for injuries, the legislature incorporated in the act provisions empowering the board to make and enforce orders for safety, to promulgate rules and regulations concerning the same, to prescribe safety devices and fix safety standards, and to provide for the inspection of all plants and industries where workmen are engaged in occupations considered hazardous. All such industries are covered by the act, over 300 being specifically named and defined. Disabilities of less than two weeks' duration are not included.

The employer is given the choice of coming under the law through the medium of one of three plans. The first plan, sometimes called

¹ State of Montana. Report of the Industrial Accident Board. 1915. 224 pp.

"self insurance," provides that the employer, upon satisfying the board as to his solvency, may arrange to pay the compensation due the injured employee directly to him, or in case of death, to his beneficiaries. In the three months ending September 30, 1915, 91 employers sought to take advantage of the act under this plan, but only 58 qualified. These employers employed, in 1914, 21,635 men. They paid out in compensation, including five lump-sum death settlements and 17 burial expenses, the sum of \$23,489.66, which would indicate a 12 months' compensation disbursement of four times that amount, or \$93,958.64. To this amount, it is suggested, should be added a liberal estimate of 100 per cent to cover possible settlements of pending claims and emergencies for the remaining nine months of the year, making a total of \$187,917.28 as the maximum amount necessary to cover all compensation payments for the fiscal year. Based on the pay rolls reported by these firms, amounting to \$25,457,751, a total cost or premium rate of 0.74 per cent is indicated. "If the actual pay roll or the one now in existence against which compensation is being charged is taken it will reduce the cost to 0.5 per cent." These figures are based on but 90 days' experience, and can therefore only be accepted as suggestive.

Under the second plan it is provided that the employer shall insure his risk with some insurance company authorized to do business in the State, and that the insurance company shall pay the compensation to the injured workman. A total of 774 applications were received under this plan, of which 92 were rejected on the ground that they were not engaged in hazardous occupations; 124 were still pending at the time of the report; and 558 employers, employing in 1914 10,841 men, completed their election under the law. These 558 employers, so far as reports were received, paid out in premiums the sum of \$130,374.78, and the insurance companies carrying the risks paid out \$1,306.36 in compensation, medical, hospital, and burial expenses. Assuming the same proportion for the remainder of the year, and based upon a reported total pay roll of \$8,363,188, a cost of 0.125 per cent is indicated. "If this should prove to be the case (which does not seem possible) it would undoubtedly result in a reduction of insurance rates."

The third plan is called State insurance. It provides that the employer shall pay a certain rate of premium on his pay roll into the State industrial accident fund and that an injured employee shall be paid directly from this fund. Of 176 employers selecting this plan, 146, employing 2,180 men, were accepted, 8 were rejected and applications of 22 were still pending. The premiums paid by these 146 contributors aggregated \$9,119.68, and the compensation paid amounted to \$157.86. Adding to this \$106 to cover pending claims

and the total maximum for the three months amounted to \$263.86, which, for the entire year at the same ratio plus 100 per cent for emergencies, would be \$2,110.88, representing a rate of 0.57 per cent on the reported pay roll of \$369,062.79.

The number of employers and employees, the amount of the pay rolls and the compensation paid, and the estimated per cent of cost are shown in the following table:

NUMBER OF APPLICATIONS AND EMPLOYEES, AND THE TOTAL PAY ROLL AND COMPENSATION PAID UNDER EACH SPECIFIED PLAN OF THE MONTANA WORKMEN'S COMPENSATION LAW.

[This table is compiled from tables in the report. The figures as to number of employees, total pay roll and compensation paid do not agree with those given in the text of the report. The discrepancy is not explained.]

Plan.	Appli- cations filed.	Appli- cations accepted.	Number of employees.	Total pay roll.	Compensa- tion paid.	Estimated cost. (Per cent. ¹)
First.....	91	58	21,625	\$25,457,711	\$22,454.61	0.74
Second.....	774	558	10,841	8,363,188	893.91	.125
Third.....	176	146	2,170	369,062	157.86	.57
Total.....	1,041	762	34,636	34,189,961	23,506.38	.....

¹ Estimated cost covering a period of 12 months based on reported pay rolls of three months.

Under all three plans 1,041 employers made application and 762 had been accepted at the time of the report. The fact that up to October 1 more than twice as many employers were under the second plan than under both the other plans combined would seem to indicate that insurance is a vital feature of the workmen's compensation act. The cost of the act to over two-thirds of the employers of the State is thus determined by the rate of insurance charged by the insurance companies. Whether the rates charged are fair and reasonable and whether employers are paying more than the cost of legitimate insurance protection justifies are matters to be determined after the act shall have been in operation for a longer period.

During the three months under consideration 34,636 employees were reported as being under the act. Of this number 1,304, or approximately 3.8 per cent, were reported to the board as having been injured. Of 1,298 accidents reported with causes therefor, 20 were fatal, 13 resulted in permanent partial disability, and 1,265 in temporary total disability; 596 such injuries were attributable to the negligence of the employees; 67 per cent occurred in the mining industry. Of the 1,298 accidents, 879 came under the first plan, 382 under the second plan and 37 under the third plan. The total days lost because of these accidents was 9,198, representing an estimated wage loss of \$35,268.80. The average wage per day of 1,271 employees injured was \$3.87 and it is explained that the large pay roll

resulting from this high average is in a measure responsible for the low rate in cost of compensation to which reference has been made.

The payments under each plan for compensation and for medical, hospital, and burial services in completed cases, including cases where the injured had not recovered but were drawing compensation, are shown in the following table. The figures cover only the months of August and September. Nothing was paid in July.

PAYMENTS IN COMPLETED CASES UNDER EACH SPECIFIED PLAN, AUGUST AND SEPTEMBER, 1915.

Plan.	Cases.	Payments made.				Total.
		Compensa- tion.	Medical.	Hospital.	Burial.	
First.....	82	\$21,107.42	\$492.19	\$30.00	\$825.00	\$22,454.61
Second.....	22	539.36	187.55	92.00	75.00	893.91
Third.....	2	149.86	8.00	.....	.....	157.86
Total.....	106	21,796.64	687.74	122.00	900.00	1 23,506.38

¹ Does not include \$1,359.07 which has been paid in 37 cases in which payments are being made. The total of the benefits paid as given in the report is \$24,865.45. The figures in this table do not agree in every respect with the figures in the text of the report. Both sets of figures are taken from the report and the discrepancy is not explained.

Detailed tables showing classification of injuries, by industries, parts of body affected, responsibility, nature, etc., are presented in the report. Considerable space is devoted to the rules of procedure of the board, a synopsis and copy of the text of the act, and opinions applicable to it rendered by the attorney general.

The report emphasizes the economy with which the law was administered, the board keeping steadily in mind the appropriation of \$50,000 for the biennium. The following financial statement is submitted:

Assets.		Liabilities.	
Industrial fund.....	\$7,518.02	Premium income (assess- ments collected).....	\$7,433.02
Administrative fund.....	50,000.00	Industrial fund warrant ac- count.....	158.86
Compensation.....	157.86	Administrative fund war- rant account.....	9,944.06
Administrative expense....	9,515.56	Appropriation.....	50,000.00
Refund.....	1.00	Bonds and securities held in trust (held for plan 1)....	149,800.00
Bonds and securities (held on deposit for plan 1)....	149,800.00	Special deposits.....	85.00
Furniture and fixtures.....	428.50		
Total.....	217,420.94	Total.....	217,420.94

Under the third plan, the State insurance plan, a detailed state-
ment is submitted showing the amount of pay roll in each industry
and the amount each industry was paying, including the uncollected

portion. From this statement it is seen that 170 firms employing 2,119 persons, with pay rolls amounting to \$286,489.11, paid in premiums a sum equal to \$7,433.02.

WASHINGTON.

The fourth annual report of the industrial insurance department, State of Washington, for the 12 months ending September 30, 1915, is a pamphlet of 119 pages, under date October 1, 1915.¹ It gives an account of the administration of the workmen's compensation act. The report is made up of reports by the secretary's division and by the chiefs of the audit, medical, claim, and statistical divisions.

The secretary's division gives a brief explanation of several important amendments to the act made by the legislature in 1915. A synopsis of these amendments was given in the January issue of the MONTHLY REVIEW in noticing the department's third annual report. A further amendment was the repeal of section 25. Under this section, upon the appeal of any workman from a decision of the department affecting the extent of his injuries, the court might appoint not to exceed three physicians to examine the physical condition of the applicant and report to the court thereon. The power conferred by this section was never invoked, but the commission entertained a fear that if put into practice it would have resulted in a different rating of an injury each time a case was reviewed by the court.

Briefly summarizing the four years' operation of the workmen's compensation act, the secretary included in his portion of the report the following statement:

Approximately 13,020 firms and individuals employing 175,000 workmen are operating under the act at the present time. The sum of \$5,521,381.34 is the total receipts from all sources to the accident fund. The sum of \$3,290,773.57 has been paid out in claims; \$40,272.03 has been refunded to employers who have permanently discontinued business in the State of Washington; \$1,705,502.64 has been set aside in reserve to guarantee the payment of pensions to widows and children. Of this sum, \$390,033.92 has been paid out in pensions, leaving a balance in the reserve fund of \$1,315,468.72. The interest on the reserve fund for the four-year period has amounted to \$122,777.01. This sum is added to the reserve fund; therefore it has cost the reserve fund only \$167,256.91 to carry the pension payments four years. The balance in the accident fund is \$474,833.10. The interest on the average daily balance for the four years has amounted to \$24,280.54, making the total amount of accrued interest on both funds, \$147,057.55. The interest on the reserve fund for the year ending September 30, 1915, was \$63,913.47, an increase of \$5,049.93 over the previous year. The sum of \$113,965.58, account of remarriage of widows, and \$41,407.59, account of death of beneficiaries, making a total of \$155,373.17, has reverted to the accident fund.

There have been 56,483 accidents reported to the commission up to September 30, 1915. Final settlements have been made in 42,510 cases. This number includes 550

¹ State of Washington. Fourth annual report of the industrial insurance department. The Workmen's Compensation Act. Olympia, 1915. 119 pp.

cases reopened from the previous year; number of fatal cases reported, 1,189; of this number 605 have required pensions, 528 have not required pensions, and 56 are in process of assembly and adjustment. There have been 37 total permanent disabilities, all of which have required pensions; 2,502 claims have been rejected for cause; 1,482 claims suspended pending receipt of claimant's address; 8,029 claims suspended, account claims not filed by workmen, trivial cases; 1,108 claims in process of assembly and adjustment, 210 on continued monthly payments, account disability still existing; 22 claims on partial payments, account of temporary reduced earning power.

The audit division reports that during the fiscal year ending September 30, 1915, there were added to the list of contributors 3,096 new accounts, bringing the grand total of firms now listed to 13,020. Of this number approximately 10,000 accounts are active. As provided in the act an adjustment of the accounts is required as soon as possible after February 1. It has been the policy to render to each firm a statement of its account with the accident fund, and in case of excess payment to issue a credit memorandum, this credit to be available for the payment of additional contributions to the accident fund, or to be refunded by State warrant in the event the firm should discontinue business.

The following statement shows receipts and disbursements of the accident fund during the fourth fiscal year, ending September 30, 1915:

ACCIDENT FUND.

Balance in the fund, Oct. 1, 1914.....		\$487, 035. 56
Total contributions, year ending Sept. 30, 1915.....	\$1, 217, 687. 67	
Interest on daily balances.....	7, 468. 91	
Return to accident fund from reserve fund, account remarriages or cessation of dependency.....	58, 639. 91	
Total.....	1, 283, 796. 49	
Less refund of excess contribution.....	19, 090. 66	
		<u>1, 264, 705. 83</u>
Total receipts.....		1, 751, 741. 39
Claims paid—year ending Sept. 30, 1915..	883, 542. 46	
Reserve set aside to secure pensions.....	393, 365. 83	
		<u>1, 276, 908. 29</u>
Balance.....		474, 833. 10

The reserve fund comprises those amounts set aside from the accident fund to provide for the payment of pensions to the dependents of injured workmen where the accident results in death or permanent total disability.

The statement of the reserve fund for the fiscal year is as follows:

RESERVE FUND.

Balance in fund, Oct. 1, 1914.....		\$1, 084, 329. 49
Total awards, year ending Sept. 30, 1915..	\$393, 365. 83	
Interest received.....	63, 913. 47	
		<u>457, 279. 30</u>
Total.....		1, 541, 608. 79
Pensions paid, year ending Sept. 30, 1915..	167, 500. 16	
Return to accident fund, account remar-		
riage or cessation of dependency.....	58, 639. 91	
		<u>226, 140. 07</u>
Balance in fund, Sept. 30, 1915.....		1, 315, 468. 72

Of the total cash balance in both funds, amounting to \$1,790,301.82, the sum of \$1,336,800 is invested in bonds to secure the reserve, leaving a net cash balance of \$453,501.82.

The law requires the State to pay the entire cost of administration of the industrial insurance department, leaving the whole amount paid in by the employers to be devoted to the payment of awards for injuries. Administration expenses for the year ending September 30, 1915, amounted to \$113,352.90; for the four years, \$430,380.83, or an average ratio of 7.8 per cent of the total contributions. A slight increase in the expense ratio has been due to a decrease in contributions, the decrease in contributions for the year ending September 30, 1915, over the previous year being \$378,163.69.

There are 48 classes into which the industries of the State are grouped for the purposes of the act. For each of 35 of these classes there is presented a separate statement of its accident and reserve funds, together with premium rates assessed per \$100 of pay roll. In 5 classes no reserve fund is given, and employments under the other 8 classes are either omitted or included in other classes.

The recommendation is made that the number of classes be reduced by at least one-half, since the experience of the past four years has apparently shown that the larger the membership of the class the greater is the security from being wiped out by a serious disaster. By such consolidation, it is suggested, the working balance could be reduced fully one-third, and this excess of cash retained by the contributors and used in their business.

The medical division reports 11,190 claims completed during the year. Injuries are classified under the following heads: Fractures, amputations, infections, scalds and burns, cuts, sprains, puncture wounds, bruises, dislocations, and unclassified injuries. Tables are presented under each of these 10 heads showing injuries further classified by member of the body injured, and indicating also the work days lost and amount of award. The following is a summary of these tables.

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INJURIES (EXCEPT FATALITIES) AND AVERAGE AMOUNT OF AWARDS FOR THE FISCAL YEAR ENDING SEPT. 30, 1915.

Kind of injury.	Temporary total disabilities.			Permanent partial disability awards.			
	Number of injuries.	Average duration of disability (work days).	Average amount of time loss awards.	Number.	Per cent.	Per cent of kind of injury.	Average amount.
Bruises.....	3,636	20.9	\$28.40	144	10.9	4.0	\$196.70
Cuts.....	2,384	18.5	25.09	169	12.8	7.0	173.60
Punctures.....	424	12.0	16.39	4	.3	1.0	87.50
Sprains.....	1,218	22.5	32.32	20	1.5	1.6	146.25
Fractures.....	1,319	73.2	94.36	289	21.8	21.9	275.00
Dislocations.....	139	51.0	70.81	22	1.7	16.0	251.25
Amputations.....	403	51.4	67.85	¹ 410	30.9	100.0	277.45
Scalds and burns.....	190	25.7	35.20	14	1.0	7.0	526.45
Infections.....	740	21.8	28.69	39	2.9	5.0	283.00
Unclassified.....	331	67.0	86.56	120	9.0	36.0	437.70
Multiples.....	406	.....	.....	96	7.2	.....	.....
Total.....	11,190	30.9	41.28	1,327	100.0	11.8	246.02

¹ Seven of these were originally bruises, cuts or punctures. The cases were reopened and final awards made for permanent partial disability after amputation.

The claim division states that there were 13,162 accidents reported during the year, a decrease of 1,927 as compared with the previous year. The following table exhibits the total accidents reported and the disposition made of claims during the four fiscal years of the operation of the compensation act; also the total from the first day of operation, October 1, 1911, to September 30, 1915:

ACCIDENTS REPORTED AND CLAIMS DISPOSED OF BY FISCAL YEARS, TO SEPT. 30, 1915.

Items.	Fiscal year ending September 30—				Total.
	1912	1913	1914	1915	
Accidents reported.....	11,896	16,336	15,089	13,162	56,483
Accidents reported (files incomplete).....	.....	.....	.....	.....	612
Accidents reported (files complete).....	10,193	17,146	15,322	13,210	55,871
CLAIMS DISPOSED OF.					
Allowed (total temporary disability; full and final award) ¹	6,356	12,380	12,584	11,190	42,510
Rejected (for cause).....	378	747	807	570	2,502
Suspended:					
Claims not made by workmen; injuries trivial.....	1,552	3,339	1,914	1,224	8,029
Unable to locate claimants, etc.....	348	519	356	259	1,482
Pensions (total permanent disability).....	2	13	13	9	37
Fatal accidents.....	257	319	347	210	1,133
Total.....	.....	.....	16,021	13,462	55,093
Less reopened during previous year.....	.....	.....	550	550	550
Total disposed of.....	8,893	17,317	15,471	12,912	55,143
Monthly payments (continued monthly account of temporary disability existing).....	314	471	422	210	210
Partial payments (continued account of reduced earning power existing as a result of injury).....	33	196	89	22	22
In process of adjustment (tracing claimants; completing files; under investigation, etc.).....	953	462	469	496	496

¹ Includes cases where permanent partial disability existed.

Fatal accidents to the number of 266 required adjudication. Of these 51 were carried over as unadjusted from the previous year and 215 were reported during the year. Disposition was made of 210 cases as follows: Pensions awarded, 105; rejected for cause, 20; suspended because dependents, if any, were unknown, 85. The remaining 56 cases were still open on September 30, 1915.

The division of statistics gives the following definitions of terms used in the preparation of the tables:

Temporary total disability refers to injuries where full time loss occurs and compensation is paid until recovery.

Temporary partial disability or loss of earning power refers to cases where injured suffers partial disability, and being compelled to work at reduced wages, receives the same percentage of compensation that his loss in wages bears to the original wage, until recovery. For instance, a man having earned \$3 per day, but being compelled to return to work at \$2 per day because of the injury, suffers one-third loss in wages and would receive one-third the original amount of compensation.

Permanent partial disability refers to cases that are permanent in their nature, and result in loss of member or function of member, and are awarded according to the percentage they bear to the maximum amount, which is \$1,500, based on the loss of the major arm.

Permanent total disabilities are those cases where injured is permanently disabled for life and is allowed a pension for which reserve is set aside.

Following this explanation the report gives a summary of the injuries and awards:

SUMMARY—INJURIES AND AWARDS.

Kind of injury.	Number of injuries.	Award.
NONFATAL INJURIES.		
Temporary total disabilities.....	11,190	\$461,925.81
Permanent partial disabilities.....	1,327	379,550.00
Awards to parents of minors.....	60	1,943.75
Permanent total disabilities.....	9	¹ 32,728.70
Total for nonfatal injuries.....	12,586	876,148.26
FATAL INJURIES.		
Fatal injuries not requiring pensions.....	² 73	.....
Fatal injuries requiring pensions.....	² 138	.....
Amount of reserves for pensions.....	.....	362,515.93
Number of burial awards.....	191	.....
Amount of burial awards.....	.....	14,310.00
Total awards for fatal injuries.....	329	376,825.93
Grand total, all awards.....	12,915	1,252,974.19

¹ Reserve.

² The total of fatal injuries disposed of as given here is 211, while the total shown in the text of the report and in the table on page 74 is 210. The discrepancy is not explained.

Claims completed during the last two fiscal years, classified according to responsibility for occurrence, are shown in the table following.

ACCIDENTS DUE TO EACH SPECIFIED PERSONAL FAULT DURING FISCAL YEARS 1914
AND 1915.

Fault.	Accidents occurring during the fiscal year ending September 30—			
	1914		1915	
	Number.	Per cent.	Number.	Per cent.
Risk of trade.....	10,279	81.7	9,956	89.0
Workman's fault.....	906	7.2	589	5.3
Fellow servant's fault.....	399	3.2	163	1.5
Employer's fault.....	31	.2	13	.1
Foreman's fault.....	18	.1	6	.05
Third person's fault.....	25	.2	17	.15
Facts not ascertainable.....	928	7.4	446	3.9
Total.....	12,586	100.0	11,190	100.00

The proportionate loss borne by employer and by employee under the compensation law is shown in the following statement:

Number of cases reporting medical treatment.....	1,907
Total amount of wages lost.....	\$143,695.72
Total cost of medical treatment.....	32,808.01
Amount of immediate loss to employee.....	176,503.73
Awards for temporary disability or immediate loss borne by employer.....	63,328.55
Net amount borne by employer.....	113,175.18
Per cent of loss borne by employer.....	36
Per cent of loss borne by employee.....	64

The above claims represent 62,828 days lost and 147 showed permanent partial disabilities amounting to \$35,512.50 which have not been included in the above amount for the reason that it is generally considered that the compensation merely offsets the disability.

WEST VIRGINIA.

The first annual report of the Public Service Commission of West Virginia, covering the period June 1, 1913, to June 30, 1914, comprises three separate parts or volumes. Parts I and II relate to the operations of the commission in connection with all classes of public-service corporations. Part III (210 pp.) under date of September 15, 1914, presents an account of the commission's work as the administrative board of the workmen's compensation fund, the law creating which became operative October 1, 1913.

The work of administering the fund divides itself into two principal departments, namely, the contract department and the claim department. The contract department deals with the approval and entering

of subscription contracts upon the part of employers, the fixing of rates of premium, the sending out of premium bills, the inspection of plants, the auditing of employers' pay rolls, and the recording of the accident history of the several plants. The work of this department is set forth almost entirely in tabular form by the chief accountant.

Tables are presented covering about 140 pages. Three tables show in detail accidents causing permanent partial disability, accidents causing permanent total disability, and accidents causing death. A fourth table shows beneficiaries receiving monthly payments on account of temporary disability accidents. A fifth table shows pension roll of beneficiaries on account of fatal accidents. These tables are preceded by statements of contributors' accounts under the respective schedules or groups of employers, showing premiums accrued, premiums paid, disbursements on account of claim, and the number of permanent, temporary, and fatal accidents. There is presented also a classification of industries under 14 schedules embracing 220 subclasses, with premium rates for each subclass.

Employers to the number of 1,882, with 155,062 employees, contributed to the fund \$634,309.82 in premiums, 10 per cent of which, according to the West Virginia law, comes out of the wages of employees, and there was paid out to November 30, 1914, for medical expenses, funeral expenses, and compensation for injuries occurring to June 30, 1914, \$275,031.90, with further liability estimated at \$665,606.56, showing a deficit of \$306,328.64. The condition of the fund on June 30, 1914, was as follows:

Premiums accrued to June 30, 1914.....	\$634, 309. 82	
Disbursed to Nov. 30, 1914, on claims occurring to June 30:		
Medical.....	\$47, 759. 19	
Funeral.....	\$22, 266. 98	
Less Eccles.....	7, 290. 09	
	<hr/>	14, 976. 89
Compensation in temporary disability claims..	132, 905. 18	
	<hr/>	195, 641. 26
Compensation paid in permanent and fatal claims.....	72, 100. 55	
Less Eccles.....	13, 947. 39	
	<hr/>	58, 153. 16
	<hr/>	253, 794. 42
Estimated liability:		
66 permanent partial injuries..	53, 355. 71	
21 permanent total injuries...	28, 000. 00	
364 fatal injuries.....	440, 351. 40	
	<hr/>	521, 707. 11
Compensation paid.....	58, 153. 16	
	<hr/>	463, 553. 95
		<hr/>
		717, 348. 37

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Deficit, June 30, 1914, exclusive of mine explosions.....	\$83, 038. 55
Proportion of estimated cost of Eccles mine explosion..	66, 987. 00
<hr/>	
Deficit, June 30, 1914, including proportion of Eccles explosion.....	150, 025. 55
Balance of cost of Eccles explosion carried forward to following year	156, 303. 09
<hr/>	
Estimated deficit June 30, 1914.....	306, 328. 64

Statements of the accounts with the various groups of employers show a surplus, as of June 30, 1914, in all except coal mining and mining other than coal, which show a deficit of \$391,370.42 and \$3,147.23, respectively.

The premiums for the first three months were estimated to have been ample to provide for all liability growing out of the accidents occurring during those months, but thereafter, owing to an increased number of permanent and fatal injuries, the maximum rate of premium under the law (\$1 per \$100 of pay roll) assessed against the coal-mining industry was greatly inadequate, even without considering the Eccles mine disaster of April 28, 1914. On that date an explosion occurred in the mines of The New Rivers Collieries Co. at Eccles, Raleigh County, in which 183 persons (including two unidentified persons and one insurance agent) were killed. The cost to the fund of this disaster for funerals was \$7,290.09, and it is estimated that \$1,200 set aside for each of the 180 identified workmen killed, or \$216,000, invested at 4 per cent, will provide for the compensation to the resulting dependents, making the total cost and liability on account of this disaster \$223,290.09, of which the funeral expenses and \$13,947.39 compensation was paid to November 30.

The loss ratio in the coal-mining schedule for the nine months, as estimated, was \$2.08 per \$100 of pay roll, of which \$1.47 was due to ordinary contingencies and 61 cents due to the Eccles explosion. The records of five years show that during the nine months a normal loss of life from explosions in the mines of the State would have been 54 instead of the 180 compensable lives lost in the Eccles disaster, and therefore the normal loss ratio from such catastrophes is 18 cents. To overcome the deficit it is computed that a rate of \$1.89 per \$100 will have to be assessed against the coal-mining industry for a period of four years; that is to say, for ordinary requirements, \$1.47; for a surplus against catastrophes, 18 cents; and to fund the deficit in four years, 24 cents. To overcome the deficit in mining other than coal it is computed that an average rate of \$1.54 per \$100 pay roll will be required; that is to say, for ordinary requirements, \$1.28; for a surplus against disasters, 16 cents; and to fund the deficit in four years, 10 cents.

Contractors showed a surplus at June 30 of \$6,894.58, but owing to an increased number of permanent and fatal injuries thereafter there was an estimated deficit in this schedule at December 31 of \$7,750. This, it is computed, will require an average rate of \$1.21 per \$100 pay roll; that is to say, for ordinary requirements, \$1.06; for a surplus against catastrophes, 13 cents; and to fund the deficit in four years, 2 cents.

Liability has been estimated for the period of 156 weeks at the respective compensation rates on account of permanent partial injuries, and at \$1,400 each for permanent total injuries, that being the approximate amount required for pensions for five years at the maximum compensation rate of \$6 per week. Liability on account of fatal injuries has been estimated at \$1,200 each, except in public-service corporations, and stores, warehouses, and hotels, in which the awards show a greater average liability. This average of \$1,200 is based on detailed estimates of the liability under 124 awards out of 241 fatal accidents (total occurring to March 31) which averaged, reckoning 10 years' compensation for widows, \$2,188.40 for each award, or \$1,126 for each fatality. Ten years is reckoned a fair estimate of the average term of dependency on the fund of widows, owing to the probability of remarriage.

There were 11,418 accidents reported for the nine months, of which 10,787 were temporary disabilities, 66 permanent partial disabilities, 21 permanent total disabilities, and 544 were fatal. Compensation was not required in 4,919 cases in which the duration of disability did not exceed one week; 243 temporary disability claims were rejected, and disbursements for medical expenses or compensation were made in 6,710 cases of temporary disability. The following table sets forth by schedules the number of employees and the number of injuries to June 30, 1914, and the total claims paid to November 30, 1914.

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NUMBER OF EMPLOYEES, AND NUMBER OF INJURIES TO JUNE 30, 1914, AND CLAIMS PAID TO NOV. 30, 1914, BY SCHEDULES.

Schedule.	Number of employees.	Injuries.				Claims paid.			
		Disabilities.			Fatal.	Medical and burial.	Temporary disability.	Pensions.	Total.
		Temporary.	Permanent partial.	Permanent total.					
Coal mining.....	82,495	5,859	46	20	476	\$28,377.07	\$88,553.76	\$61,314.75	\$178,245.58
Timbering and woodwork- ing.....	18,605	982	3	.....	21	7,528.30	14,443.12	2,762.59	24,734.01
Mining other than coal, in- cluding quarrying.....	2,252	192	3	.....	5	955.50	1,807.31	1,112.78	3,875.59
Glass and clay products....	5,562	203	.....	.....	3	3,476.67	3,130.03	169.35	6,776.05
Metal.....	14,652	2,009	4	.....	9	17,102.73	10,993.25	1,652.77	29,748.75
Public-service corporations..	7,482	207	3	.....	10	2,833.49	3,058.60	1,637.85	7,529.94
Chemicals, oils, paint, and drugs.....	733	30	1	.....	.....	1 347.50	231.09	340.88	919.47
Clothing, textile and leather.	4,155	96	1	.....	.....	1 703.55	738.22	261.42	1,702.19
Stoves and warehouses.....	2,860	57	.....	.....	1	676.66	581.09	321.38	1,579.13
Contractors.....	12,618	879	4	1	19	7,443.54	8,457.58	2,358.48	18,259.60
Explosives.....	79	1	.....	.....	.....	1 7.00	3.42	.....	10.42
Pulp, paper and printing..	1,486	108	.....	.....	.....	1 198.25	346.01	.....	544.26
Food products.....	1,896	51	1	.....	.....	1 311.91	508.90	168.30	989.11
Miscellaneous.....	187	23	.....	.....	.....	1 64.00	52.80	.....	116.80
Total.....	155,062	10,787	66	21	544	70,026.17	132,905.18	72,100.55	275,031.90

¹ This covers medical claims only.

² This sum was distributed among 6,710 claims.

It is stated that since the compensation law has been in force many fatal and nonfatal accidents and resulting deaths are reported to the mining department which would not previously have been reported.

The expense to June 30 of administering the law was \$29,803.75, or 4.7 per cent of the amount of premiums.

The work of the claim department is to receive the application of an injured employer for an award, docket his claim, assist in the preparation of his proof, obtain the proper evidence from employer, attending physician, and witnesses to the accident as to the cause and the nature and extent of the injury, and to pass preliminarily upon the proofs required in determining the amount of his award.

The work of this department is set forth by the chief medical examiner in 15 pages of tabular matter and 4 pages of text. The tables show the 11,418 accidents classified according to the nature of injury and part of body injured, and also the number of days lost on account of each of nine classifications—amputations, dislocations, fractures (simple), fractures (compound), wounds (infected), wounds (not infected), burns, sprains, and muscular cramps, and miscellaneous.

There were 44 cases of hernia reported, 9 of which were rejected by the commission. On this subject the following is quoted:

Out of 100 cases of hernia 84 are inguinal, 10 femoral, and 5 umbilical, leaving 1 for miscellaneous; and 35 per cent of the people as a class have a hereditary tendency to

hernia. One male in every 14 has hernia. The vast majority of acquired hernias develop very, very gradually and are not the result of an injury or fortuitous event. Only a very small per cent of hernias are the result of specific injuries. * * * and in a normal subject it [is] impossible to produce a hernia by traumatism or accident alone, unless the injury be of sufficient severity to tear or puncture the abdominal wall. The common hernia, or so-called rupture, is a diseased condition which exists from birth in the congenital type, or for some time previous to descent in the acquired type. * * * It can not be formed at once. It would appear from the above that if the commission allowed compensation in all cases of hernia, they would be paying for a diseased condition of long standing. * * *

The medical officer therefore recommends the establishment of a proper ruling which shall be a guide for action in all hernia cases.

REPORT OF THE NEW YORK STATE FACTORY INVESTIGATING COMMISSION.

On February 15, 1915, the New York State Factory Investigating Commission submitted its final report to the legislature.¹ This commission, consisting of nine members, was created² as a result of the Triangle Waist Co. fire occurring in New York City on March 25, 1911, in which 145 employees lost their lives. It was authorized "to inquire into the conditions under which manufacturing is carried on in cities of the first and second class of the State to the end that remedial legislation might be enacted for the protection of the life and health of all factory workers, and for the best interests of the public generally." Recognizing that "better working conditions produce increased efficiency, the lessening of mortality and morbidity of workers, and greater economy in manufacturing and producing," the commission conducted investigations into the general sanitary conditions in factories, fire hazards in factories, women's trades, conditions in bakeries (including physical examination of bakers employed therein), manufacturing in tenements, conditions in canneries, night work of women in factories, the tobacco industry, the printing industry, conditions in mercantile establishments, and conditions in the dangerous trades. During 1913 and 1914 the commission was authorized to inquire into the rates of wages paid in the different industries of the State, to report on the advisability of establishing a minimum wage, and, if thought advisable after further investigation of mercantile establishments, to prepare and present to the legislature a recodification of the labor law. In all, four reports³ of the activities of the commission were presented to the legislature. The latter, acting on many of the

¹ State of New York. Fourth report of the Factory Investigating Commission; report and appendixes. 5 vols. Albany, 1915.

² Authorized by legislative enactment approved June 30, 1911; commission organized in August, 1911.

³ Reports of the New York State Factory Investigating Commission: 1912, 3 vols.; 1913, 2 vols.; 1914, 1 vol.; 1915, 5 vols.

recommendations contained therein, enacted laws concerning the following points:

1. The registration of factories.
2. Physical examination of children before employment certificate is issued.
3. Fire drills.
4. Automatic sprinklers.
5. Fire prevention; removal of rubbish; fireproof receptacles for waste material; protection of gas jets; prohibition of smoking in factories.
6. Prohibition of the eating of lunch in rooms where poisonous substances are prepared or generated in the process of manufacture; adequate hot and cold washing facilities for such establishments.
7. Employment prohibited of women within four weeks after childbirth.
8. Summary power of commissioner of labor over unclean and insanitary factories.
9. Reorganization of the labor department; industrial board.
10. Penalties for violation of labor law and industrial code.
11. Fireproof receptacles; gas jets; smoking.
12. Fire-alarm signal system and fire drills.
13. Fire escapes and exits; limitation of number of occupants; construction of future factory buildings.
14. Amendment to Greater New York charter with reference to fire prevention law.
15. Prohibition of the employment of children under 14 in cannery sheds or tenement houses; definition of factory building; definition of tenement house.
16. Manufacturing in tenements.
17. Hours of labor of women in canneries.
18. Housing conditions in labor camps maintained in connection with factory.
19. Physical examination of children employed in factories.
20. Amendment to child labor law; physical examination before issuance of employment certificate; school record; supervision over issuance of employment certificate.
21. Amendment to compulsory education law; school record.
22. Night work of women in factories
23. Seats for women in factories.
24. Bakeries.
25. Cleanliness of workrooms.
26. Cleanliness of factory buildings.
27. Ventilation; general; special.
28. Washing facilities; dressing rooms; water-closets.
29. Accident prevention; lighting of factories and workrooms.
30. Elevators.
31. Dangerous trades.
32. Foundries.
33. Employment of children in dangerous occupations; employment of women in core rooms.
34. Sanitation in mercantile establishments.
35. Hours of labor of women in mercantile establishments limited to 54 hours a week in the entire State.
36. Hours of labor of children between 14 and 16 in mercantile establishments reduced from 54 to 48 hours a week and their employment prohibited for more than eight hours a day or after 6 o'clock in the evening of any day.

During 1914 the constitutionality of two of these laws—prohibiting night work of women in factories, and prohibiting the manufacture

of infants' and children's wearing apparel in a living apartment of a tenement house—was challenged in the courts. In both cases the constitutionality of the laws was upheld, although in the first instance an appeal was taken to the court of appeals where the case was pending at the time the report was transmitted. The briefs submitted by the commission in each of these cases are included in Volume I.¹

The final report of the commission considers in detail (1) wages and wage legislation, (2) recodification of the labor law, and (3) consolidation of departments having jurisdiction over buildings in New York City.

As the result of complaints that there was overinspection of buildings in New York City by different city and State departments and that there was frequent duplication of work and at times conflict in the orders issued by the various departments, the commission made a thorough investigation and concluded it was desirable that the various inspection services of New York City and its boroughs should gradually be reorganized and their functions consolidated so as to reduce expense to the city, but in such a way as to continue the "effectiveness of the relation of the construction and use of buildings."

A tentative bill to amend the Greater New York charter so as to make possible the suggested changes is given in the report.²

The bill recodifying the labor law is the outcome of public hearings and a careful study of briefs and memoranda submitted by those interested. It is confined in the main to changes in form and arrangement rather than to changes in the substance of the law, and is a rearrangement of the provisions of the old law in logical order, removing ambiguities and contradictions that had crept in because of repeated amendments and making the law understandable to the employers and employees who are affected by its provisions. "The department of labor has been completely reorganized. It has been given facilities commensurate with great tasks imposed upon it, but despite its great correctional powers the commission believes that the greatest and highest function of the department of labor is to educate rather than to exercise the police power," and it suggests that the department endeavor to "bring about a closer relationship between labor and its employer to the end that conditions be improved, not only by the enactment of laws or the rigid technical enforcement of statutes but by showing that a greater care of labor induces a greater interest in the business of the employer and a corresponding profit both to the employer and the employee. Improvement of working conditions is real economy."

¹ Appendix II, pp. 301-371.

² Vol. I, Appendix III, p. 804.

WAGES.

The commission made an exhaustive study of the general subject of wages. To this end not only were public hearings held, but a questionnaire¹ was sent to several thousand people throughout the country, including experts, representatives of labor, professional men, members of economic and statistical organizations, and others. This questionnaire called for an expression of opinion as to the factors determining wages and the adequacy of the wage thus determined and as to the desirability of minimum wage (or other form of governmental action), whether it should be restricted to women and minors, by what agency to be determined, and its probable effects.

Supplementing the questionnaire a letter asking for a statement of views on the subject of minimum-wage legislation, to what extent it should be enacted, and the difficulties of administration and how they might be overcome, was sent to economists, social workers, lawyers, representatives of labor, employers and their representatives, and certain state and foreign minimum-wage commissions. To a number of employers and educators a letter was addressed requesting a discussion on the relation of industrial training to wages. The replies received from these two groups are presented in the form of a "wage symposium."² In addition to the above, memoranda on the relationship between low wages and the vice problem and immorality among women, and the advisability of enacting minimum-wage legislation were received from a group of men and women considered by the commission well qualified to speak with authority because of their interest and knowledge obtained through many years of experience and study in these matters.³

Detailed studies were made of specific phases of the wage problem by special investigators working under the direction of the commission. These reports are included in Volumes II, III, and IV and cover the following subjects: A report on vocational training,⁴ including a chapter on the wage value of vocational training; the relation of irregular employment to the living wage for women;⁵ minimum-wage legislation in Australasia,⁶ and, the cost of living in New York State,⁷ considered from the standpoint of unmarried women, men living independently, and the normal family, together with supple-

¹ The questionnaire, a list of those whose replies are presented, and the text of the replies are given in Vol. I, Appendix III, pp. 418-591.

² Vol. I, Appendix III, pp. 592-855.

³ A list of those replying, together with the text of their replies, is given in Vol. I, Appendix III, pp. 38 to 418.

⁴ Vol. IV, p. 1237.

⁵ Vol. II, p. 497.

⁶ Vol. IV, p. 1845.

⁷ Vol. IV, p. 1461.

mentary chapters on "Living on six dollars a week,"¹ "How the working girl of New York lives,"² and "A study of families."³

In carrying on the inquiry the commission deemed it essential to discover the following facts: (1) The wages actually paid in typical industries throughout the State; (2) The sufficiency of these wages to maintain employees in simple decency and working efficiency; and (3) The ability of industries to increase wages on the basis of the earning capacity of labor. The following indicates in brief the scope of the investigation:

	Estab- lish- ments.	Workers.
Mercantile establishments.....	143	69, 933
Shirt factories.....	112	13, 056
Paper-box factories.....	238	11, 760
Confectionery.....	84	9, 767
Millinery ⁴	57	3, 983
Button factories ⁴	59	916
Total.....	693	109, 415

The inquiry was not limited to women and minors,⁵ but in the trades investigated they were found to predominate, and in the summary of this report the commission confines itself almost wholly to the question of wages paid this group of workers. "It is clear," says the report, "that the number of women who receive a low wage exceeds greatly the number of men, and the need of remedial legislation in their behalf is immensely more urgent." In every instance the data were taken from employers' records, and these were amply corroborated by interviews with more than 2,000 workers.

A distinction is made between the wage rate and actual earnings, the latter in many cases being less than the rates quoted because of part-time or irregular work, fines for lateness, breakage, mistakes, etc. Of 90,596 employees for whom weekly rates were reported, 51.8 per cent are rated at less than \$9, 42.9 per cent are rated at less than \$8, and 20 per cent are rated at less than \$6. In the mercantile establishments it was found that 25.3 per cent of the women and girls are rated at less than \$6; in the shirt factories 51 per cent are rated at less than \$6.50; in paper-box factories 51 per cent are rated at less than \$6.50; and in the confectionery establishments 50 per cent are rated at less than \$6.

When it comes to actual earnings, the commission found that of the 54,114 women employed in the four principal industries indi-

¹ Vol. IV, p. 1673.

² Vol. IV, p. 1693.

³ Vol. IV, p. 1783.

⁴ This industry was studied by a special investigator whose report is given in Vol. II. The result of this investigation is not included in the general statistical summary presented in Vol. III, nor is it considered in the general discussion and conclusions resulting from the wage investigation.

⁵ In the statistical summary, Vol. III, male workers are included.

cated above, covering 577 establishments and employing a total of 104,519¹ workers, 34.5 per cent receive less than \$6 per week, 61.6 per cent receive less than \$8, 72.2 per cent receive less than \$9, while 27.8 per cent are paid \$9 or more. In stores employing 31,646² females the earnings of 67.5 per cent are less than \$9 per week, 56.4 per cent get less than \$8, while 28.8 per cent receive less than \$6. These earnings include, where ascertainable, all commissions paid to sales people. Of 9,424³ females employed in the shirt industry, which is largely on a piecework basis, 65.5 per cent receive less than \$8 at the end of the week, and 39.3 per cent receive less than \$6. In the manufacture of paper boxes the proportions are almost exactly the same. In the confectionery industry, employing 5,676⁴ females, 53.2 per cent receive less than \$6, and 79.1 per cent get less than \$8. The following table shows the number and per cent of female workers in each industry earning each specified amount weekly.

TABLE 1.—NUMBER AND PERCENT OF FEMALE WORKERS EARNING EACH SPECIFIED AMOUNT PER WEEK, BY INDUSTRIES.

Industry.	Under \$6.		Under \$8.		Under \$9.		\$9 and over.		Total.	
	Num-ber.	Per-cent.	Num-ber.	Per-cent.	Num-ber.	Per-cent.	Num-ber.	Per-cent.	Num-ber.	Per-cent.
Mercantile establishments.....	9,071	28.8	17,775	56.4	21,267	67.5	10,250	32.5	¹ 31,517	100.0
Shirt factories.....	3,671	39.3	6,114	65.5	7,065	75.7	2,268	24.3	² 9,333	100.0
Paper-box factories.....	2,947	38.5	4,995	65.3	5,865	76.7	1,782	23.3	³ 7,647	100.0
Confectionery factories.....	2,987	53.2	4,443	79.1	4,858	86.5	759	13.5	⁴ 5,617	100.0
Total.....	18,676	34.5	33,327	61.6	39,055	72.2	15,059	27.8	54,114	100.0

¹ Not including 129 not reporting weekly earnings.
² Not including 91 not reporting weekly earnings.
³ Not including 81 not reporting weekly earnings.
⁴ Not including 59 not reporting weekly earnings.

That low wages do not necessarily apply entirely to those with little or no experience or to those young in years is amply demonstrated by a study of the statistical summary. Forty-nine per cent of those who have had 5 years' experience in stores are receiving less than \$8 per week. In the large department stores 53.7 per cent and in the 5 and 10 cent stores 91 per cent of the women reporting receive less than \$8. In all the industries investigated approximately 60 per cent of the women and girls receive less than \$8. Nearly 60 per cent of the women in mercantile establishments are over 21 years of age, and of this number 34.3 per cent receive less than \$8. Of the total women in both department and 5 and 10 cent stores receiving less than \$8 a week, 37.6 per

¹ Of this number 740 did not report weekly earnings as shown in the statistical summary, Vol. III, pp. 670, 809, 833, and 860.
² This total includes 129 who did not report weekly earnings, as shown in Table I.
³ This total includes those not reporting weekly earnings and therefore does not agree with the total shown in Table 1.

cent are over 21 years of age. The majority of women in all four trades studied reach the \$8 level only after 30 years of age. The investigation showed that two-thirds to three-fourths of the women and girls employed are unmarried, and that these were working not from choice but from necessity. In a special study of 1,300 women it was found that 65 per cent lived with their families, 75 per cent of whom turned all their earnings into the family fund while more than 20 per cent paid board.

Emphasis is placed on the fact that all the trades investigated are seasonal¹ which means that during certain periods of the year large numbers of employees are idle or are working in other employments and therefore do not earn as much as the weekly rate quoted. In fact, for periods ranging from 1 to 10 weeks many earn nothing at all. Others remain away from work and suffer deductions. Of 1,036 females in stores who reported on this point, 653, or 63 per cent, lost time during the year. In the shirt industry 152 women (86 per cent of those reporting) reported the loss of 5,502 days in a single year, or more than a month each. This loss of time and shifting of employment necessarily affects the average annual earnings. Based on the rates paid in retail stores 54 per cent of the girls would be reckoned as likely to receive less than \$400 a year. As a matter of fact, 61 per cent of the best paid women workers fell below that figure. In department stores shifting of employees is very great. In one New York City store over 12,000 employees were hired in one year in order to maintain a permanent force of 3,000. This, however, is exceptional. In one establishment the change amounted to only about 20 per cent of the normal force, while in practically all the others it was 100 per cent or over.

Throughout all the trades there appears to be no wage standard. For instance, in one factory cutters are receiving from \$10 to \$15 per week, while in another factory they receive for the same kind of work from \$15 to \$20. The commission discovered that wages in the shirt industry are depressed by competition with prison-made goods, the output from two institutions outside the State in 1913 being 195,000 dozen shirts which were sold in the open market. In an earlier report it was recommended that this practice be prohibited.

In the general wage study, information is presented showing hours of labor; days worked; earnings and experience; conjugal condition; annual earnings; time lost; seasonal fluctuations; deductions; premiums, bonuses, and commissions; relation between wages and sales, earnings and marriage, and earnings and nativity. A special chapter is devoted to organization and working conditions in retail

¹ See Vol. II, p. 497, for a detailed presentation of the subject of the relation of irregularity of employment to the living wage for women.

stores, and there is also a chapter on mutual aid associations in New York City stores.

In the investigation on the cost of living the commission found that a typical weekly budget of a girl working in a trade at \$6 a week is as follows:

Half of furnished room.....	\$1.50
Breakfast and dinner.....	2.10
Lunch.....	.70
Car fare.....	.60
Clothes, at \$52 a year.....	1.00
Total.....	5.90

In this account there is no allowance possible for doctor or dentist, amusements, newspapers, or extra car fare. After saving the balance for one year, this girl would have \$5.20 if she worked steadily and had no expenditures other than those given in the schedule. But the trade in which she works is seasonal, so she will not work the full 52 weeks. Her annual income may, therefore, be reduced one-fifth or more from even the low level given above. In the special report on this subject, to which detailed reference is made elsewhere in this digest, the author holds that the cost of living must include food, clothing, shelter, intellectual development, recreation, and a provision for the future. The inquiry developed the fact that only a few rooms in New York City can be secured at \$2.50 a week; that comfortable rooms cost \$4 a week, and that occasionally board and lodging may be had for \$7, but that the usual price is \$9. It is quite apparent that this standard is altogether too high, especially in view of the fact that a large majority of women (61.6 per cent), as shown in Table 1 above, earn less than \$8 a week.

OBJECTIONS TO WAGE LEGISLATION.

The hearings, which were held by the commission, and the questionnaire, to which reference has been made, developed reasons both for and against State interference with wages of women and unions. The objections which are presented in the report are followed by arguments in support of wage legislation, in which each objection is taken up and specifically denied.

CONCLUSIONS.

After careful deliberation and study of the results of its investigation and the testimony taken, the commission came to the conclusion that the State is justified in protecting the underpaid women workers and minors in the interest of the State and society. It found that there are thousands of women and minors employed in the industries throughout the State of New York who are receiving

too low a wage adequately to maintain them in health and decent comfort. The commission expresses the belief that this injuriously affects the lives and health of these underpaid workers, and that it is opposed to the best interests and welfare of the people of the State.

In order to remedy this evil, the commission recommends:

1. The enactment of a law creating a wage commission¹ which, after investigation, shall establish wage boards, composed of representatives of employers, employees, and the public, in any industry in which it has reason to believe women and minors are receiving less than a living wage. Wherever possible, the employers and workers are to be elected by their respective groups; but if this is impossible, employers and employees shall be notified of meetings at which the work of the wage commission shall be explained and the representatives of the trade asked to present recommendations to the wage board. The wage commission, after public hearings, and upon consideration of the report of the wage board, shall determine the amount of the living wage necessary for such women and minors, and recommend to employers payment thereof. The determination of the wage commission shall be published, and the commission shall also be required to publish the names of employers who fail to comply with its recommendations.

2. The adoption of an amendment to the constitution empowering the legislature to establish a wage commission which shall have power to fix living wages for women and minors in industry.

3. That the legislature submit this proposition to the constitutional convention for consideration.²

COST OF LIVING.³

A comprehensive study of wages, with a view to recommending the establishment of a minimum-wage law, is impossible without a careful investigation of the cost of living. Under the direction of the commission, this investigation was made by Prof. F. H. Streightoff, of DePauw University, Indiana, who in his report presents exhaustive data showing (1) the cost of living to a single woman, (2) the cost of living to a man living independently, and (3) the cost of living for a normal family. To determine as definitely as possible the amount of money necessary for life in "simple decency and working efficiency" was the purpose of the inquiry. The data were gathered from 1,937 women and girls in mercantile establishments and paper-box, shirt, and candy factories. The number is small as compared with the total employed in these industries in the State, but it is explained that the schedules used represent all sections of the four industrial fields covered and "for the purpose in hand, the study of the cost of living, the quantity seems adequate."

In considering the cost of living to single women, some details of the report may be summarized. Of the 1,937 tabulated, 1,789 had never married or were widowed. Of the total number of women

¹ A bill for the creation of a wage commission is submitted in the report. See Vol. I, p. 291.

² The matter was submitted to the constitutional convention, but no action was taken.

³ Vol. IV, p. 1461.

and girls, 18.8 per cent were between the ages of 14 and 17, and 83.8 per cent were less than 30 years of age. More than three-fourths (1,467) are native born. It is noted that 888, or 45.8 per cent, left school at or before the age of 14 years, which is the legal age at which a child may leave school for work. "To work" was assigned by 41.8 per cent as the reason for leaving school. About 11 per cent left school on account of illness, or death or sickness in the family, and it is stated that not one of these workers was earning as much as \$14 per week. Nearly two-thirds were living at home, most of them in families in which there were other wage earners. However, 93 women were found to be the sole support of their families, each family ranging in size from 2 to 10 persons. It is shown that of 1,929 women 62.6 per cent claimed to be entirely self-supporting, while 23.2 per cent declared that they were obliged to contribute to the support of relatives.

While instructive and necessarily requiring attention in considering the establishment of a minimum wage, these facts are, however, relatively unimportant as compared with the relation existing between the earnings of these women and their necessary expenditures. Upon this relation definite minimum-wage legislation must ultimately be based, for a minimum wage, to be worth while, must be equal to the cost of living. Thus a large portion of Prof. Streightoff's report is devoted to a discussion, with numerous detailed tables, of the earnings of these women, what they spend, how they live, the quality and quantity of their food, the sufficiency of their clothing, their home conditions, and their savings. The study of weekly earnings shows that a large proportion, 27.9 per cent, of 1,929 women reporting were receiving under \$6 a week, while 67.7 per cent of the entire number were earning less than \$8 per week. In the New York City factories the great proportion, more than 56 per cent, were found to be earning \$5 to \$7.99. Generally speaking, in all the industries one-fourth were earning under \$6 a week, two-thirds under \$8, and four-fifths under \$9. The average weekly earnings in New York stores and factories was \$7.77 and \$6.62, respectively, and the average earnings in up-state stores was \$6.23, and in factories \$7.01. The weekly earnings of these 1,929 women are specifically shown in the following table:

TABLE 2.—CLASSIFIED WEEKLY EARNINGS OF 1,929 FEMALE EMPLOYEES IN STORES AND FACTORIES IN NEW YORK STATE.

Industry.	Under \$6.		Under \$8.		Under \$9.		\$9 and over.		Total.	
	Num-ber.	Per-cent.	Num-ber.	Per-cent.	Num-ber.	Per-cent.	Num-ber.	Per-cent.	Num-ber.	Per-cent.
New York City.										
Stores.....	158	19.8	441	55.4	568	71.4	228	28.6	1,796	100.0
Factories.....	198	37.6	381	72.3	430	81.6	97	18.4	1,527	100.0
Other cities.										
Stores.....	123	30.1	351	86.0	383	93.9	25	6.1	408	100.0
Factories.....	60	30.3	133	67.2	156	78.8	42	21.2	198	100.0
Total.....	539	27.9	1,306	67.7	1,537	79.7	392	20.3	1,929	100.0

¹ Not including 4 not reporting weekly earnings.² Including the 8 not reporting weekly earnings, this total is 1,937, which is the total number scheduled.

What do these women spend to maintain a life of "decency and working efficiency"? Prof. Streightoff found that among the New York City store employees living at home and contributing to the family income "there seems to be a general tendency for the contribution to increase with the increase in wages, but the per cent of the earnings contributed to the family diminishes as the incomes grow larger." The average amount contributed by this group was \$4.53 a week, or 58.3 per cent of the weekly earnings. The mean weekly contribution to the family income was, among the New York City factory employees, \$5.70, or 86.1 per cent; among the up-State store women, \$4.54, or 72.9 per cent; and among the factory girls, \$5.64, or 80.5 per cent, of the average earnings. These figures show that a large proportion of the income of the working girl who lives at home is turned over to the parents. Directing attention to the women who reside with relatives or friends, Prof. Streightoff shows that among the employees in New York City factories the average weekly cost of board, lodging, and lunches is \$3.15, while the average for those in up-State stores is \$3.03 and for employees in up-State factories \$3.12. But the store women in New York City pay an average of \$4.74.

The normal expenditure of female workers in the stores and factories in New York State is shown more specifically, in connection with average weekly earnings, by the following table:

TABLE 3.—AVERAGE EXPENDITURE, FOR EACH PURPOSE, OF 1,937 FEMALE EMPLOYEES IN STORES, AND CANDY, PAPER BOX, AND SHIRT FACTORIES IN NEW YORK STATE.

Item.	New York City stores.			New York City factories.			Up-State stores.			Up-State factories.		
	Num-ber re- port- ing.	Aver- age spent.	Per cent. ¹	Num-ber re- port- ing.	Aver- age spent.	Per cent. ¹	Num-ber re- port- ing.	Aver- age spent.	Per cent. ¹	Num-ber re- port- ing.	Aver- age spent.	Per cent. ¹
Board, lodging, and lunches (women living independently).....	116	\$5.59	71.9	39	\$3.75	56.6	76	\$4.27	68.5	.....	\$4.40	62.8
Board, lodging, and lunches (women living with friends and relatives)....	102	4.74	61.0	113	3.15	47.6	126	3.03	48.6	.....	3.12	44.5
Contribution to family (women living at home)...	112	4.53	58.3	339	5.70	86.1	236	4.54	72.9	.....	5.64	80.5
Lunches.....	473	1.02	13.1	231	.85	12.8	150	.87	14.0	.....	.92	13.1
Clothing.....	374	1.61	20.7	208	1.34	20.2	200	1.58	25.4	.....	1.48	21.1
Laundry.....	50	.57	7.3	17	.55	8.3	60	.53	8.5	.....	.68	9.7
Car fare.....	558	.66	8.5	184	.58	8.8	203	.58	9.3	.....	.51	7.3
Savings.....	33	.94	12.1	43	.99	15.0	47	.94	15.1	.....	1.03	14.7
Dues and insurance ²	424	.13	1.7	283	.05	.8	268	.04	.6	.....	.07	1.0
Miscellaneous (spending money) ²	493	.49	6.3	358	.44	6.6	251	.52	8.3	.....	.54	7.7
Average weekly earnings...	3 800	7.77	.....	3 531	6.62	.....	3 408	6.23	.....	3 198	7.01	.....

¹ Owing to inaccuracies in the table, Vol. IV, pp. 1512-1517, the figures in this column are computed from the average in the preceding column. In many instances, however, they agree with those in the table referred to.

² Average of all reporting, whether dues and insurance were paid or not, or whether they had spending money or not. Other averages are for those actually having the expenditure.

³ This is the number actually reporting, on which the average in the next column is based.

From the statement of facts and from the above table the conclusions are drawn that (1) the girl living with friends or relatives spends less for food and shelter than the one living independently; (2) the woman living at home contributes to her family more than the woman living in either other condition; (3) the expenditure for these purposes comprises a very large proportion of the wages, amounting in the case of women living independently and working in New York stores to over 70 per cent of their earnings, and to much higher proportions in some of the lower wage groups.¹

Letters of inquiry were sent out to persons whose opinions the commission considered valuable, asking, among other things, for estimates of the living wage for women in New York City. The replies received indicated that for the average woman under 18 years of age \$10.98 is necessary for living expenses, while for one over 18 years of age the amount to be thus spent should not be less than \$11.36. The author sees no apparent reason for discriminating between those over and those under 18 years of age, and concludes that it seems impossible to decide, from the standpoint of the cost of living, that either the girl or the adult woman requires a larger wage than the other.

¹ For instance, in New York City factories girls who earn from \$4 to \$4.99 reported an outlay of 99 per cent of their earnings for shelter and lodging, and the women living independently and employed in the up-State stores earning between \$5 and \$5.99 spent 81 per cent of their wages thus.

Admitting that the data available for the report were fragmentary and that it was impossible to rely solely upon the facts elicited from interviews with the girls, and basing the estimates on the conditions of women living independently, Prof. Streightoff presents the following as a necessary expense list:

TABLE 4.—ESTIMATED WEEKLY AND ANNUAL NECESSARY EXPENDITURE OF WOMEN AND GIRL WAGE EARNERS LIVING INDEPENDENTLY.

Item.	Annual expenditure.	Weekly expenditure.
Clothing.....	\$88. 00	\$1. 69
Laundry.....	20. 80	. 40
Room and board (except lunches)....	208. 00	4. 00
Lunches.....	46. 80	. 90
Car fares.....	31. 20	. 60
Insurance.....	20. 00	. 38
Amusements, recreation.....	26. 00	. 50
Health and incidentals.....	26. 00	. 50
Total.....	466. 80	8. 97

From the above showing it may be concluded that \$9 a week, if a steady income, will suffice to maintain in decency a working woman in New York City. It is interesting to note in this connection that 1,537 females (79.7 per cent), a great majority of whom, owing to seasonal fluctuation, are not employed the year round, were receiving less than the minimum thus established.¹ It should be kept in mind that this allowance of \$9 a week is not large enough to permit any saving. These estimates are set at the minimum and the fact is emphasized that this wage must be regular income. His study of living conditions led Prof. Streightoff to conclude that "the very least upon which a working woman can decently maintain herself in that city of the State where rents and food prices seem about the lowest, in Buffalo, is \$8.20 per week the year round, and in New York City \$9."

In connection with this subject illustrations of interiors and floor plans of homes are given showing the living conditions of working women.

In Part II Prof. Streightoff shows that the cost of living to a man living independently is \$505.80 per year, or \$9.73 a week.

In the study of the cost of living for a normal family, consisting of a man at work, a woman and three unemployed children, the conclusion is drawn that a total of \$876.43, or \$16.85 per week, is necessary for a decent existence. This is divided as follows:

¹ This proportion is substantially the same as that indicated in Table I, where it is shown that of the 54,114 female employees scheduled, 39,055, or 72.2 per cent, were receiving less than the minimum here suggested.

TABLE 5.—ESTIMATED NECESSARY WEEKLY AND ANNUAL EXPENDITURE FOR FAMILIES OF FIVE IN NEW YORK STATE.

Item.	Annual expenditure.	Weekly expenditure.
Food.....	\$325.00	\$6.25
Rent.....	200.00	3.85
Fuel and light.....	20.00	.38
Clothing.....	140.00	2.69
Car fare.....	31.20	.60
Insurance (man, \$20; family, \$15)....	35.60	.69
Furnishing.....	7.00	.13
Health.....	22.00	.42
Education; newspaper.....	5.63	.11
Recreation and amusement.....	50.00	.96
Miscellaneous.....	40.00	.77
Total.....	876.43	16.85

SPECIAL STUDIES.

Aside from the special inquiry made into the cost of living, other specific investigations were conducted in connection with the general study of wages. These have already been noted, but each is deserving of special reference. One inquiry related to irregularity of employment and its bearing upon a living wage for women and girls.¹ In the report which was prepared by Irene Osgood Andrews, assistant secretary, American Association for Labor Legislation, the author divides the workers into three main classes: (1) The smaller group of those permanently employed, (2) those who are employed for the entire busy season but are laid off at its close, and (3) those who drift in and out of the industry, working only a few days or weeks at a time in one place.

The essential facts determined by this special study seem to indicate that actual earnings fall far short of possible earnings based on "rate of pay"; that the average girl or woman loses in wages an amount equal to no less than 15 per cent of her possible earnings; that in many seasonal trades from 25 to 50 per cent of the workers remain three months or less; that a living income is dependent not only upon reasonable wages but also upon reasonable regularity of employment, and that unless reasonable regularity of employment can be definitely assured a living wage throughout the year can be secured only by setting up a wage rate sufficiently high to cover unemployment periods or by establishing some form of unemployment insurance.

Another matter intimately connected with the earning capacity of workers is their general education and special training for the occupation they follow. Thus the commission deemed it wise to make a special investigation of the relation between education and earnings. The report on vocational training² is taken up under

¹ Vol. II, p. 497.² Vol. IV, p. 1237.

four heads: (1) Vocational training in the paper-box industry, (2) the candy industry, (3) department stores, and (4) the wage value of vocational training. Each subject is treated by a special writer after personal study of conditions in the State. The investigation was actuated, it is stated, by a belief that the ultimate success of many of our commercial and industrial enterprises depends to a large degree upon the efficiency and intelligence of the workers engaged in those enterprises and that there is a very high correlation between training and ability in certain of the so-called skilled occupations. In a study ¹ of 15 paper-box factories employing 1,467 persons, of whom 68 per cent are females, Mr. Robert J. Leonard, professor of industrial education, Indiana University, after a detailed description of the processes employed, reaches the conclusion that in the solid-box industry a short-unit course in vocational training is desirable in certain departments where men work but that in the case of the great bulk of women workers no such course would increase their earnings at all.

Anna C. Phillips, formerly investigator for the New York committee on safety, made a study to determine the possibility of vocational training in the candy industry.² Thirteen factories were visited and in only eight were the jobs studied. These factories are classed as making cheap and penny goods, cheap and high-grade goods, and high-grade goods. Based upon the machine and hand operations involved in the making of candy, both of which are described in the report, the author suggests that only six jobs may be regarded as skilled—candy making, chocolate hand dipping, bon-bon dipping, fancy packing, crystallizing, and pan work. The greatest number employed are low paid and unskilled. There is no attempt to provide systematic training in the semiskilled work or even increase the efficiency of the worker in the semiskilled job and thus lead to a higher wage. This condition, coupled with the fact that the industry is largely seasonal, a large number of the workers being laid off after Christmas, makes the question of training workers “a complicated one.”

A very careful and detailed analysis of department store work is presented by Iris Prouty O’Leary, special assistant for vocational education, State education department of New Jersey, in the report ³ on the possibility of vocational training in that branch of industrial activity in which so many women and girls are engaged.⁴ The analysis of the business is entirely from the teaching standpoint and

¹ Vol. IV, p. 1243.

² Vol. IV, p. 1347.

³ Vol. IV, p. 1363.

⁴ Approximately 80 per cent of the employees are females; Vol. IV, p. 1372. In the chapter on wages in retail stores, Vol. II, p. 53, it is stated that “out of 57,359 workers recorded by sex, 33,732 (nearly 59 per cent) are women and girls.”

for the purpose of determining to what extent there is in each occupation a teachable content which has a direct bearing on the efficiency of the employees in the particular job. The author finds that the department stores offer a wide field and exceptional opportunities for vocational training, because in every type of employment there is a certain definite content of knowledge or manipulative skill or both for which training can be given, and that difficulties of securing workers possessing the special knowledge required for efficiency in the various occupations indicates that there is need for such training.

Very little information was obtained showing the value of training in terms of increased wages or promotion. It is recommended that training be conducted on a part-time or continuation basis, that for the present instruction be organized as trade extension rather than trade preparatory training, that the instruction be specific, supplementing that received in the stores, that the training be carried on in the store where the necessary business atmosphere can be secured, that the schemes of training should first be planned to meet the needs of the average worker, and that the plan of training should be preceded by careful and comprehensive analysis of the industry for the purpose of determining the content of each occupation and its factors of efficiency.¹

For the purpose of finding an answer to the question, "Does vocational training increase the earning capacity of the wage worker?" Mr. Wesley A. O'Leary, assistant secretary, National Society for Promotion of Industrial Education, at the request of the commission made an investigation,² somewhat limited by the lack of available sources of information, in which the data were obtained by personal visits or by letter from vocational schools in various parts of the United States, from corporation schools, and from firms known to be interested in vocational training. Special reports and studies made by individuals and commissions, catalogues and records of vocational schools, and detailed wage statistics of 250 men in the sheet-metal and machinists trades were also used. These latter had taken training in evening vocational schools after entering their trades and their wages were obtained both before and after training.

The fact is emphasized that the data do not pretend to measure in exact terms the wage value of vocational education. In the first place, the expression of earnings as a product of training may be influenced by such considerations as the supply and demand of labor, organized labor, geographical location, health of the wage earner, the personal equation as between the worker and the foreman, how far industry recognizes an increase in the productive power of the laborer by a corresponding increase in wage, and other influences.

¹ Suggested unit courses are given in Vol. IV, p. 1400.

² Vol. IV, p. 1407.

In the second place, the wage value of vocational education is minimized somewhat by the fact that industrial education is of comparatively recent development, so that most vocational schools have hardly had time to learn what their problem is, to say nothing of developing a successful system of training. The persons with whom the vocational school is concerned are placed in three groups:

1. Young people who have not yet entered industry, but who are seeking admission through the training of the vocational school. They may be called the trade preparatory group.

2. Adult workers who are engaged in low-grade employment and who desire training for more highly skilled occupations. They may be called the trade-changing group.

3. Skilled workers who wish additional training along the line of their trade as the next step forward to greater efficiency. They may be termed the trade-extension group.

Taking up each group separately the author considers the effect on workers and their earning capacity of training in certain specific vocational and trade schools, and then suggests that the data obtained appear to indicate—

1. A tendency on the part of the day schools included in this investigation to place the graduate of the school in the industry at a higher initial wage than he could obtain without school training. How much higher can not with exactness be determined.

2. A tendency showing that these schools can materially increase the earning power of the young worker by saving him from "blind alley" occupations.

3. A tendency on the part of employers to pay graduates of certain trade schools on entrance to the industry approximately journeyman's wages.

4. A tendency which indicates the ability of a certain type of trade school to increase the wage of the worker by advancing him from low-grade employments to those requiring greater skill.

5. A limited tendency in the case of evening schools giving trade extension courses to slightly increase the earning power of experienced workers.

It is made clear that the evidence gathered does not conclusively demonstrate that these tendencies are general, nor does it prove that they are not. These tendencies taken together indicate a capacity on the part of vocational schools to advance the wage of the trained worker.

Volume V of the commission's report is devoted to testimony taken at hearings held to consider the subjects of consolidation of departments in New York City and wages and wage legislation.

In that portion of the report devoted to minimum-wage legislation in Australasia¹ the author aims to present the history of the laws in force in those States, together with the administrative working and economic and social conditions obtaining under each system prior to the outbreak of the European war. The greatest emphasis is put upon the systems of New South Wales, Victoria, and New Zealand.

¹ Vol. IV, p. 1845.

It is pointed out that the minimum wage as it is known in Australasia has been fixed either by wage boards or by a compulsory arbitration system with the deciding power lodged in a court consisting of a judge and perhaps a representative of both employers and employees. Each system owes its origin to a radically different motive—the former to the desire to put an end to the worst forms of sweating and underpayment in certain industries and the latter to the determination to do away with industrial warfare. The following brief outline is given showing certain points of resemblance and certain differences between these two systems in Australasia:

1. A minimum wage for adult workers and a special rate for those less competent is provided for by each method.

2. Each plan has passed through an evolution more or less similar. The minimum rate itself, the permit scheme, provisions for learners, the enforcement of awards and determinations, the penalty for discrimination against those taking part in the proceedings of a court or boards, the repression of strikes and the need for conciliation, all these are problems which have arisen in the course of time under both methods and have been met in much the same way.

3. Under every system except that of the Commonwealth, the main tribunals for the fixing of wages are deliberative bodies, where both employees and employers are represented.

Among the differences are noted the following:

1. Wages boards as such have no jurisdiction over strikes and lockouts as do the courts of arbitration.

2. The scope of the arbitration courts is wider and their quasi legislative and judicial powers are greater than those of the wages boards.

3. Under the wages-boards plan there is less interference with individual rights, contracts, and organizations than under compulsory arbitration.

4. The wages-board scheme in its purity implies the voluntary submission of the parties with compulsion only after every form of investigation and appeal is exhausted; arbitration relies essentially upon compulsion.

5. The wages boards make no distinction between unionists and nonunionists but have dealt with men as individuals. Compulsory arbitration depends essentially upon organization, and as unionism has been a most important factor in its administration, preference is frequently given to unionists.

The report indicates a tendency for each method to gravitate toward the other, and distinctions between the two plans can not be made as sharply now as they could several years ago. The minimum wage has generally tended to exceed the living wage, although, in the three States mentioned above, the adopted minimum usually has been "what the employees could get and the employers would give." So far as definite principles are concerned the Commonwealth conciliation and arbitration court, whose influence has extended to every court and wage board in Australia and also to New Zealand, has declared the basis of minimum wages to be "the normal needs of the average employee regarded as a human being living in a civilized community." This "irreducible minimum" for the adult man has

been interpreted to be a family wage for an unskilled laborer and was fixed in one of the most recent awards at 51 shillings (approximately \$10) per week. The rate for women is based on the needs of a single person living alone. The court held that the welfare of an industry must yield precedence to the living wage, but the rate for skilled workers may be reduced if the condition of an industry so demands. Provision is made for irregularity of employment, the traveling expenses of certain classes of workers, hours, holidays, and special industrial conditions. As the purpose of the court is primarily to secure industrial peace, interstate competition is a question most carefully considered. Yet notwithstanding this fact, the Commonwealth court in making its awards has adhered more closely to definite principles than any other tribunal.

OFFICIAL REPORTS RELATING TO LABOR.

UNITED STATES.

California.—*Industrial Accident Commission. General safety orders issued by the Industrial Accident Commission of the State of California, effective January 1, 1916. [Sacramento], 1915. 15 pp.*

Contains summary of safety provisions of the workmen's compensation, insurance, and safety act, as well as the general safety orders issued by the commission as to the guarding of dangerous machinery and places, statement of methods for forming safety committees as recommended by the National Safety Council, and some representative opinions of employees and employers as to the compensation act and the work of the commission.

————— *Mine safety rules, issued by the Industrial Accident Commission of the State of California, effective January 1, 1916. Sacramento, 1915. 123 pp.*

Contains rules as to precautions to be observed in operating mines and subsidiary works; rules relative to reporting accidents, the employment of women and children in mines, and concerning mine sanitation, ventilation, hoistways, exits, etc.

New Hampshire.—*Bureau of Labor. Eleventh biennial report of the bureau of labor for the fiscal period ending August 31, 1915. Part one. Concord, N. H. 1915. 95, [1] pp.*

Presents statistics relating to industrial disputes, occupational diseases, unemployment in New Hampshire, and industrial accidents, and contains a directory of manufacturing and mechanical establishments and of local trade-unions.

The following data among others are reported:

	1912	1913	1914	1915
Industrial disputes.....	4	5	6	2
Cases conciliated or arbitrated.....				1
Cases of occupational diseases reported.....				1
Nonfatal accidents.....	282		833	290
Fatal accidents.....	3		9	6
Expenditures for—				
Salary of commissioner.....				\$1,600.00
Assistants.....				\$955.20
Incidentals, including travel.....				\$569.12
Arbitration.....				\$174.34
Printing.....				\$372.66

100 MONTHLY REVIEW OF THE BUREAU OF LABOR STATISTICS.

The information concerning unemployment was secured from the secretaries of local trade-unions throughout the State and relates to the months, January to June, 1915, considered in two quarterly periods. Returns came from 73 organizations representing for the first quarter 6,293 members and 5,952 for the second quarter. These organizations represented 21 localities and 31 distinct trades. The following table has been prepared from the report by this bureau and shows the membership, and the number and per cent unemployed for each quarter of 1915 by those trades reporting 100 or more members in either quarter.

NUMBER AND PER CENT OF TRADE-UNION MEMBERS IN NEW HAMPSHIRE UNEMPLOYED DURING THE FIRST AND SECOND QUARTERS OF 1915.

Union.	First quarter (January-March), 1915.				Second quarter (April-June), 1915.			
	Unions reporting.	Mem-ber-ship.	Num-ber unem-ployed.	Per cent unem-ployed.	Unions reporting.	Mem-ber-ship.	Num-ber unem-ployed.	Per cent unem-ployed.
Barbers.....	5	164	4	2.4	5	167	3	1.8
Bartenders.....	4	257	18	7.0	4	267	38	14.2
Boot and shoe workers.....	3	1,228	140	11.4	3	1,268	87	6.9
Brewery workers.....	2	150	8	5.3	1	20	(1)	(1)
Carpenters and joiners.....	5	360	166	46.1	4	396	64	16.2
Cigarmakers.....	1	600	47	7.8	1	650	25	3.8
Firemen and engineers, locomotive.....	2	156	59	37.8	2	158	49	31.0
Garment workers.....	2	267	(1)	(1)	2	263	(1)	(1)
Machinists.....	2	184	8	4.3	2	184	8	4.3
Maintenance-of-way employees.....	5	336	7	2.1	5	338	7	2.1
Molders.....	4	185	59	31.9	4	182	45	24.7
Paper makers.....	2	156	(3)	(3)	2	156	2	1.3
Paving cutters.....	3	335	150	44.8	3	300	190	63.3
Quarry workers.....	6	327	92	28.1	6	342	55	16.1
Railroad-station employees.....	5	361	4	1.1	5	310	9	2.9
Railway trainmen.....	3	472	55	11.7	3	370	47	12.7
Typographical union.....	4	130	13	10.0	4	59	3	5.1
All others.....	14	625	42	6.7	13	522	26	5.0
Total.....	72	6,293	872	13.9	69	5,952	658	11.1

- ¹ None.
- ² All members working 4 or 5 days a week.
- ³ Working 5 days a week, February to May, inclusive.
- ⁴ Nearly every one idle in January account of cold weather.
- ⁵ Not including 52 blacksmiths who were out of work 2 days week.

The data are also presented by causes, summarized in the following brief statement:

NUMBER AND PER CENT UNEMPLOYED IN TRADE-UNIONS IN NEW HAMPSHIRE, ON ACCOUNT OF SPECIFIED CAUSES, FIRST AND SECOND QUARTERS, 1915.

Cause.	First quarter, 1915.		Second quarter, 1915.	
	Number.	Per cent.	Number.	Per cent.
Lack of work.....	703	11.16	¹ 488	8.19
Sickness, accident, old age.....	129	2.04	115	1.93
Unfavorable weather.....	46	.73	11	.18
Strikes and lockouts.....	15	.23	15	.25
Other causes.....	31	.49	29	.48
Total.....	924	14.67	710	11.53

¹ Not including 52 blacksmiths who were out of work 2 days a week.

New Jersey.—*Bureau of Industrial Statistics. Industrial directory of New Jersey. Trenton, 1915. lxxiii, 742 pp. Map.*

This industrial directory of New Jersey is in the nature of an industrial guidebook for the State, and constitutes the fifth of a similar series issued by authority of law in 1901, 1906, 1909, and 1912. The principal part of the volume consists of descriptive notes relating to New Jersey municipalities having a population of 100 or more, showing for each, the population, banking facilities, railroad and express service, schools, churches, etc., with such other information as may be desired by home seekers or by manufacturers seeking the most desirable locations for the establishment of manufacturing plants. Added to each descriptive note is a list of manufacturing establishments, names of officers of the board of trade or other semipublic body of a similar nature. By way of introduction to the volume there is a summary of industrial data covering New Jersey as a whole. A list of all trunk-line railroads and their branches traversing New Jersey is included.

A feature of the directory is the "Index to industrial opportunities" under which are listed the municipalities or towns included in the descriptive notes referred to above, with reference to the page numbers of each descriptive note, classified under various heads in order to show where opportunities and advantages of various designated kinds, such as free factory sites, local financial aid in starting new industrial enterprises, available labor forces, water power, idle factory buildings, raw material, etc., for any particular industry may be secured. An alphabetical industry classification of the goods made in New Jersey and the firms engaged in their manufacture conclude the volume.

— *Department of Labor. Standard safeguards; transmission machinery. [Trenton, N. J.] 1915. 26 pp.*

This pamphlet contains specifications and illustrations for the construction of safeguards for transmission machinery which the commissioner of labor may require to be installed in the establishments of the State.

Ohio.—*Industrial Commission. Physical examination of wage earners in Ohio in 1914. Columbus, 1915. 29 pp. (Bulletin of the Industrial Commission of Ohio, vol. 2, No. 6; Department of investigation and statistics, report No. 18.)*

A summary of the contents of this monograph will appear in a future number of the REVIEW.

Washington.—*Bureau of Labor. Special report on the salmon canning industry in the State of Washington, and the employment of oriental labor. November, 1915. Olympia, 1915. 16 pp.*

Salmon fishing, one of the foremost industries of the State, is particularly seasonal, of short duration, and requires intensive labor. Owing to these conditions and the irregular demand for labor, and general risk involved, a system of contract labor has developed. Formerly Chinese coolies predominated, but owing to the exclusion acts, Japanese labor has to a large extent supplanted it. Considerable friction is thus engendered between the Japanese and white labor, resulting at times in uprisings and demonstrations.

Owing to the uncertain factors of the industry, irregular and uneven runs and comparatively limited season, three classes of labor have been found necessary: (1) Permanent employees throughout the year, principally Chinese, semiskilled, with wages ranging from \$45 to \$125 per month and board; (2) Seasonal contract, unskilled Japanese labor secured through Oriental employment agencies; wages ranging from \$40 to \$45 per month and board, and (3) Extra labor consisting of the white resident population for intensive periods of the season, for which 25 to 30 cents per hour is paid.

Excluding fishermen and other outside laborers, it is estimated that in ordinary years the first group consists of 900 to 1,200 white men and 800 to 1,000 Orientals, the second of 7,000 to 9,000, and in extraordinary years of 12,000 to 15,000 contract laborers. The third group is so irregular that no reliable estimate as to numbers can be given.

The introduction of machinery in recent years has reduced manual labor required from 50 to 100 per cent.

It is stated that the cannery men, as well as white residents, are hostile to Oriental labor. Although one large packing company of Everett has been operated for three years with a white crew, the problem seems, in general, to lie in securing an adequate number of white laborers.

The report concludes by declaring that "The employment of white labor can be largely accelerated by the assistance of the Federal Labor Department through its employment agency system, which in connection with the postal service has access to laboring people living in rural districts. These people may be reached and their applications received for the work long before the canning season so that an adequate supply may be assured. Given the opportunity to get the work, many honest and reliable workers will take advantage of it. Heretofore no means for this purpose have been at their command. The manner in which the Federal Labor Department furnished workers in the berry fields and fruit districts of the Puyallup and Yakima valleys this year to the satisfaction of growers is an example worthy of notice."

United States.—Bureau of Labor Statistics. *Wages and hours of labor in printing and binding trades. Letter from the Secretary of Labor transmitting, in response to a request of the joint committee on printing, certain information relative to the wages and hours of labor in the printing and binding trades in 1914 and 1915. Prepared under the direction of the Commissioner of Labor Statistics. Printed for the use of the Joint Committee on Printing. Washington, 1916. 129 pp. (64th Congress, 1st session, Committee print.)*

This report was prepared in response to a request from the joint committee on printing on July 14, 1915. It presents the union scale of wages and hours of labor in the printing and binding trades in 1914 and 1915, and the actual rates of wages and hours of labor prevailing on May 15, 1915, in 179 representative printing and binding establishments in 26 cities of the United States.

The cities included and the number of establishments were as follows:

City.	Estab-lish-ments.	City.	Estab-lish-ments.
Atlanta, Ga.....	5	Milwaukee, Wis.....	12
Baltimore, Md.....	7	Minneapolis, Minn.....	8
Birmingham, Ala.....	5	New Orleans, La.....	5
Boston, Mass.....	10	New York City, N. Y.....	8
Buffalo, N. Y.....	5	Philadelphia, Pa.....	12
Chicago, Ill.....	7	Pittsburgh, Pa.....	9
Cincinnati, Ohio.....	10	Providence, R. I.....	7
Cleveland, Ohio.....	8	Richmond, Va.....	5
Denver, Colo.....	3	St. Louis, Mo.....	4
Detroit, Mich.....	9	Salt Lake City, Utah.....	4
Indianapolis, Ind.....	6	San Francisco, Cal.....	3
Kansas City, Mo.....	6	Seattle, Wash.....	3
Memphis, Tenn.....	5	Washington, D. C.....	13

All data included in the report were gathered by special agents of the Bureau of Labor Statistics by personal visits to business agents and secretaries of the respective trade-unions and to the offices of employers. In collecting the union wage scales, printed scales, written agreements, and trade-union records were consulted whenever available. The information furnished by employers was taken directly from the pay rolls of the several establishments visited.

Five statements are presented as follows: (1) Union scale of wages and hours of labor in each trade, by cities, May 1, 1915, and May 1, 1914; (2) classified and average rates of wages per hour in each trade, by cities, in 1915, from establishment pay rolls; (3) full-time hours of labor per week in each trade, by cities, in 1915, from establishment pay rolls; (4) overtime rates of pay and leave allowances in each establishment in 1915; (5) free hospital and medical service, by cities, in 1915.

— *Bureau of Mines (Department of the Interior). Fifth annual report for the fiscal year ended June 30, 1915. Washington, 1915. 106 pp. Chart.*

"Safety and health for workers in the mineral industries and greater efficiency and the prevention of waste in preparing and utilizing mineral resources—these are the aims of the Bureau of Mines and the purpose of the work it is doing." This report contains a brief history of the origin, development, and accomplishments of the bureau, and the benefits derived from the work of the bureau such as: Development of methods of preventing dust explosion in coal mines; increased use of approved explosives; safeguarding the use of electricity in mines; rescue and first-aid methods developed; more healthful conditions in metal mines; accurate and comparable statistics of accidents in the mineral industries; determination of the quality of different coals; inspection of coal purchased for the Government; recovery of the by-product in coke making; safety in metallurgical plants; decrease of waste and increase of efficiency in mineral technology; lessening of waste of petroleum and gas; discovery of the Rittman processes for refining gasoline and manufacturing benzol and toluol; prevention of damage from smelter smoke; etc.

With respect to accident statistics the report states that when the Bureau of Mines was established no accurate and comparable statistics of mine accidents were available for all the mining States. Since then the bureau has succeeded in securing statistics of accidents in coal mines, metal mines, quarries, coke ovens, ore-dressing plants, and smelters, which data are published in special bulletins.

Systematic methods of rescue work and recovery after mine disasters form a prominent feature of the work of the bureau, it is stated. The following table shows the number of mine disasters investigated by the bureau during each calendar year since 1907. It does not, of course, show all accidents of that kind occurring in mining.

ACCIDENTS INVESTIGATED BY BUREAU OF MINES EMPLOYEES, AND NUMBER OF PERSONS KILLED, SUFFOCATED, AND RESCUED, 1907-1915.

Item.	1907	1908	1909	1910	1911	1912	1913	1914	1915 to June 20.	Total.
Number of accidents investigated.....	12	16	25	25	35	47	73	65	35	338
Number killed.....	837	331	494	522	462	283	512	377	207	4,025
Number suffocated.....	269	114	80	200	201	51	122	63	83	1,183
Number rescued by Bureau of Mines men.....		2	29	20	13	7	19	2	¹ 43	135
Number rescued by others.....	21	16	124	243	81	84	106	26	41	742
Number who escaped unassisted.....	5	33	403	132	18	117	100	1,127	194	2,038

¹ Includes 42 miners at Layland, W. Va., rescued jointly by Bureau of Mines crew, Gary (W. Va.) crews, State inspectors, company officials, and volunteer crews.

— *Chief of Ordnance. Report of the Chief of Ordnance to the Secretary of War, 1915. Washington, 1915. 51 pp. (Annual report, War Department, fiscal year ended June 30, 1915.)*

— *The Taylor system of shop management at the Watertown Arsenal: Premiums earned during the month of June, 1915. Washington, 1915. 53 60 pp. (Appendix: Report of the Chief of Ordnance, 1915.)*

This report is here listed in order to call attention to that part of it which relates to the system of scientific management and its operation in the Watertown Arsenal of the

War Department. The appendix consists merely of tables showing the amount of premiums earned during the month of June, 1915, by employees at the arsenal.

It is noted in the report that the system was interrupted to a slight extent by legislation contained in the Army Appropriation Act of March 4, 1915, which directed that no funds appropriated by that act should be expended for the making of time studies of an operation or for the payment of any premium, bonus, or cash reward to any employee over and above his regular wages. This curtailed the system in the Frankford Arsenal in which thereafter a system of simple piecework was adopted, while at the Watertown Arsenal, in which work is done under the Fortifications Act and not under the Army Appropriation Act, the system of premium payments or bonuses was continued. The time studies had, however, to be discontinued as the Army officers who had been conducting them had been paid out of the Army Appropriation Act.

The Chief of Ordnance is of the opinion that the Taylor system of scientific management as practiced in the Watertown Arsenal since 1911 demonstrates "the advantage to the Government and the advantage to the workmen."

There is submitted each month from the Watertown Arsenal a statement showing the employees who have worked upon premium jobs, which gives the day rate of each employee, the time which he has worked during the month under the premium system, and the amount of premium which he earned, stated both in dollars and cents, and as a percentage of his regular wages for the same time. From the statement for the last month of the fiscal year which is covered by this report, June, 1915, the following tabulation has been made up:

STATEMENT OF PREMIUMS PAID AT THE WATERTOWN (N. Y.) ARSENAL:

Occupation.	Number employed on premium work.	Average premium over and above regular pay expressed as a percentage of the latter.	Percentage of all the work done which was performed under premium.
Molders.....	9	27.62	72.48
Machinists.....	164	24.13	55.15
Machinist's helpers.....	25	22.29	8.90
Blacksmiths.....	10	19.68	33.39
Blacksmith's helpers.....	11	21.32	30.34
Molder's helpers.....	8	33.16	6.46
Chippers.....	10	31.97	38.97
Laborers.....	31	28.61	22.85
Toolmakers.....	4	20.99	7.13
Machine operators.....	2	17.88	97.51
Screw makers.....	1	35.30	99.75
Machinist's apprentices.....	1	1.90	82.04
Furnace helpers.....	2	27.35	19.25
Apprentice molders.....	1	11.64	57.01
Core makers.....	1	33.33	2.01
Firemen.....	1	25.34	17.35
Steam-hammer drivers.....	1	24.11	39.58
Skilled workmen.....	6	26.98	27.94
Painters.....	4	23.21	31.29
Carpenter's helpers.....	1	43.12	5.75
Carpenters.....	7	27.95	15.78
Toolsmiths.....	2	33.39	16.56
Mason's helpers.....	1	35.97	30.42
Teamsters.....	4	31.26	97.48
Plumber's helpers.....	1		.35
Riggers.....	1	32.14	47.28
Skilled laborers.....	1	32.38	14.12
Engineers, locomotive crane.....	1	32.36	47.12
Gang bosses.....	10	10.70	29.43

The operations of the Workmen's Compensation Act of 1908, as affecting employees in the arsenals and establishments of the Ordnance Department, is presented in the table which follows:

STATISTICS OF FEDERAL WORKMEN'S COMPENSATION AS AFFECTING THE
ORDNANCE DEPARTMENT.

Year ending June 30—	Total injured.	Absent on account of injury.							Amount paid on account of disability.	Total num- ber of em- ploy- ees.
		Total.	Less than 5 days.	5 to 10 days.	10 to 15 days.	15 to 20 days.	20 to 25 days.	25 days and over.		
1909.....	286	236	87	33	13	44	13	46	\$3,714.70	6,628
1910.....	372	284	78	37	19	47	39	64	11,541.15	6,037
1911.....	518	326	115	29	12	47	43	80	15,218.85	5,444
1912.....	612	358	131	29	11	65	43	79	15,865.99	5,317
1913.....	800	441	178	44	17	64	48	90	18,376.30	5,305
1914.....	1,518	566	229	75	37	101	34	90	18,631.92	6,127
1915.....	1,956	630	281	58	26	88	63	114	25,152.99	7,143
Total.....	6,062	2,841	1,099	305	135	456	283	563	108,501.90	.....

In this connection the Chief of Ordnance recommends a reduction of the waiting period for the payment of compensation and of the amount of compensation paid, which "should not be full payment, but should leave upon the employee a sufficient part of the burden to constitute an incentive for returning to his work with reasonable promptness."

— *Department of Labor, Opinions of the Solicitor for the Department of Labor dealing with workmen's compensation. From August, 1908, to April, 1915. Washington, 1915. 811 pp.*

The Federal Compensation Act of May 30, 1908, granting compensation to employees in hazardous occupations in the service of the United States, is not the subject of interpretation by the courts. Authority to construe the act, as well as to administer its provisions, rests with the Secretary of Labor, and the officer directly authorized to construe the act is the solicitor of the department, who is an official of the Department of Justice. His opinions, however, are purely advisory and become the official expression of the Secretary of Labor merely by virtue of the approval of the latter.

The Federal compensation act became operative August 1, 1908, and the compilation of the opinions of the solicitor recently issued by executive authority includes the period of the operation of the act up through April, 1915. It therefore includes opinions from a former compilation, which appeared in 1912, after four years of operation under the act as interpreted by the Department of Commerce and Labor. Besides the opinions of the solicitor of the department, there are also included in the compilation several opinions of the Attorney General and the decisions of the Comptroller of the Treasury, involving disputed questions regarding the payment of moneys under the act. Overruling opinions contain a note to that effect.

— *Philippine Commission. Report of the Philippine Commission to the Secretary of War, July 1, 1913, to December 31, 1914. (In one part.) Washington, 1915. xi, 426 pp. (Annual reports, War Department, fiscal year ended June 30, 1915.)*

This report includes that of the Philippine Commission, the Governor General, Secretaries of the Interior, Commerce and Police, Finance and Justice, Public Instruction, constituting a complete report of the operations of the different departments, bureaus, and offices of the Government during the period July 1, 1913, to December 31, 1914. It includes, therefore, a period of 18 months by reason of a change in December, 1913, making the fiscal and calendar years identical.

The report of the Bureau of Labor, under the Secretary of Commerce and Police, is given in two parts—July 1 to December 31, 1913, and January 1 to December 31, 1914. The employees of the bureau are all Filipinos. While their number (30, of whom 5 are messengers) was unchanged during the years 1913 and 1914, their salaries were increased from 16,684.03 pesos (\$8,342.02) in 1913 to 38,149.48 pesos (\$19,074.74) in 1914. This includes employees and salaries paid in operation of employment offices also. The total appropriation for 1914 was 54,324.20 pesos (\$27,162.10).

There were six strikes reported in the last half of 1913 and ten during the year 1914. Of the former, one resulted in favor of the strikers, three in favor of employers, and two were unsettled at the time the report was made. In 1914 four were satisfactorily adjusted, and in 6 no settlement was effected.

From July 1, 1913, to December 31, 1914, 356 labor accidents were reported, resulting in 393 persons being injured, of whom 82 died from injuries, 25 were permanently and 284 temporarily disabled, and in 2 cases the results were not reported.

During the year 1913 there were 10,021 persons who registered with the four free employment agencies. Of this number 7,879 were placed. During 1914 there were 8,501 such registrations and positions were found for 7,173. Of this last number 4,028 were immigrant laborers sent to other localities.

— *Public Health Service. Annual report of the Surgeon General of the Public Health Service of the United States for the fiscal year 1915. Washington, 1915. 398 pp.*

This is the Forty-fourth Annual Report of the Public Health Service of the United States. The service is conducted through seven divisions, and its operations for the year 1914-15 are reported under the following titles: Scientific research; Foreign and insular quarantine and immigration; Domestic (interstate) quarantine; Sanitary reports and statistics; Marine hospitals and relief; Personnel and accounts; and Miscellaneous.

The results of a comprehensive investigation begun the previous year relating to the health of garment workers and hygienic conditions in this industry are summarized in this report.

An investigation of the illuminating systems showed that in some shops inadequate light was furnished. Of the 34 workshops containing 45 workrooms, all were using daylight, while 23 per cent of them depended to some extent on artificial light, and in a little over 56 per cent of the working plants photometric measurements showed that the light furnished fell below the standard established by the service as necessary, and recommendations were made with a view of improving these conditions.

The report on the results of the study relative to the liberation of poisonous gas in the use of gas-heated pressing irons is in preparation.

An extensive survey of every typical illuminating system in use in the United States Treasury Building at Washington, D. C., was made.

A separate report will be prepared showing the results of a comprehensive study on the prevalence of tuberculosis in the various industries, and upon the influence of climatic conditions, floods, population elements, immigration, etc., on the tuberculosis death rate.

Mine, steel-plant and convict-camp sanitation, child-labor problems, health organizations, etc., form separate subjects for discussion.

Under the title "Occupational disease, and Workmen's Compensation Laws" decisions of the Supreme Judicial Court of Massachusetts, and the Supreme Court of the State of Michigan are noted.

Among the needs of the Public Health Service is noted the necessity for the enlargement of the studies of occupational diseases and the causes giving rise to them. These

require inspections of factories and statistical compilations, laboratories for research, and other improved methods and standards implying a large increase of funds.

FOREIGN COUNTRIES.

Denmark.—*Arbejdsløshedsinspektør. Indberetning til Indenrigsministeriet for regnskabsaaret 1914-15. (1. April 1914-31. Marts 1915.) Copenhagen, 1915. 17 pp.*

Unemployment insurance has been organized in Denmark since April 9, 1907, under the act of that date. At the close of the fiscal year March 31, 1915, as reported by the unemployment inspector, there were in existence 57 recognized voluntary unemployment insurance funds, with a membership of 139,505; there was an increase of two in the number of funds over the preceding fiscal year. Of the total number 52 were organized for individual trades and are national in their scope, four were limited to certain trades within a district, and one was a purely local fund. The membership was so proportioned that 45 per cent were found in Copenhagen and Fredericksberg, 38 per cent in the towns of the Provinces, and 16 per cent in rural localities. The total receipts of the 57 funds in the current year were 3,252,186.49 crowns (\$871,585.98); the total expenses were 3,078,532.59 crowns (\$825,046.73). Statistics for the fiscal year 1913-14 show that of the total receipts for that year, 1,664,513.25 crowns (\$446,089.55), or 51 per cent, were contributed by the members, 30 per cent was provided by State subvention, 14 per cent by municipal subsidies, and 5 per cent from other sources—interest, donations, etc. There is here presented a summary table of data for the year 1914-15.

NUMBER OF MEMBERS OF UNEMPLOYMENT INSURANCE FUNDS, UNEMPLOYED PERSONS RECEIVING BENEFITS, DAYS BENEFITS WERE PAID, AND WORKING DAYS LOST, 1914-15.

Funds.	Number of members of funds.	Persons receiving benefits.		Days benefits paid.		Working days lost.		Per cent of working days lost for which compensation was paid.
		Total.	Per 100 members.	Total.	Per member.	Total.	Per member.	
Building trades and furniture making.....	26,805	15,078	58	695,985	27	1,339,661	51	51
Day laborers.....	47,263	16,541	36	598,741	13	1,140,908	25	52
Wood products.....	18,085	4,185	24	127,397	7	201,768	12	55
Textiles and clothing.....	13,842	4,163	31	122,486	9	¹ 232,660	¹ 18	¹ 48
Lumber and woodworking.....	5,635	1,665	30	52,913	10	¹ 98,518	¹ 18	¹ 50
Metal working.....	17,730	5,451	32	155,604	9	263,187	15	51
Printing and bookbinding.....	5,648	2,004	37	105,155	19	157,328	29	58
Others.....	² 4,305	926	22	32,855	8	84,221	20	39
Total.....	² 130,921	50,013	37	1,891,136	14	³ 3,518,249	³ 26	³ 51

¹ Not reported in one fund.

² Not including 192 members of two newly organized funds which do not figure in the returns for the fiscal year.

³ Not reported in two funds which paid benefits for 2,762 days.

Great Britain.—*Home Department. Interim report on an investigation of industrial fatigue by physiological methods. London, 1915. 34 pp.*

Descriptions and results of a series of physiological tests used in investigating industrial fatigue. The starting point for the inquiry, it is stated, dates from a resolu-

tion adopted at the International Congress on Hygiene and Demography held at Brussels in 1903 to the effect that "the various Governments should facilitate as far as possible investigation into the subject of industrial fatigue." The experiments were conducted under factory conditions along lines which required careful laboratory work continued for some months as determined suitable for the purpose.

The term fatigue is used in this report in a broad sense, and includes a general lowering of the functions of the body as a result of extreme or prolonged activity. The methods used were intended to discover fatigue of muscle and of the peripheral nerve, and mental fatigue, all involving nine different tests.

————— *Thirty-ninth annual report of His Majesty's inspector of explosives, for the year 1914. London, 1915. 137 pp.*

Certain modifications of Orders in Council relating to the pressure permitted in acetylene gas generators, and the permitted substitution of certain elements in the manufacture of gunpowder are mentioned in the introduction.

Under the title of manufacture, the number of factories operating under certificate or license, new licenses issued, reports of results in experiments to determine the best type of buildings suitable for manufacture of explosives, number of accidents and their results are summarized. Names of new explosives added to, and those removed from the authorized lists, as well as those reported authorizable, and those in which the definition or name is altered are given. Other topics covered are: Storage, packing and conveyance; importation; Government inspection and search; report of chemical advisers; accidents; experiments; explosives in coal mines, etc.

The following table shows the number of accidents occurring in the manufacture, storage, conveyance, and use of explosives and from miscellaneous causes, 1910-1914, by years:

NUMBER OF ACCIDENTS OCCURRING IN THE MANUFACTURE, STORAGE, USE, ETC., OF EXPLOSIVES, 1910-1914, BY YEARS, AND FOR THE TEN-YEAR PERIOD 1905-1914.

Year.	Manufacture.			Storage.			Acci- dents in- trans- porta- tion.	Use and miscella- neous.			Total.		
	Acci- dents.	Per- sons killed.	Per- sons in- jured.	Acci- dents.	Per- sons killed.	Per- sons in- jured.		Acci- dents.	Per- sons killed.	Per- sons in- jured.	Acci- dents.	Per- sons killed.	Per- sons in- jured.
1910....	65	6	25	11	3	11	.....	374	57	406	450	66	442
1911....	69	13	40	4	5	5	.....	442	38	503	515	56	548
1912....	104	1	33	3	4	3	1	348	30	393	456	35	429
1913....	86	13	50	6	4	7	13	403	48	427	498	66	485
1914....	92	21	41	3	1	7	2	350	44	375	447	66	423
1905 to 1914..	664	77	295	65	28	64	8	3,608	455	3,979	4,345	561	4,339

¹ One person killed and one injured.

As the explosives act (1875) does not apply to the reporting or prevention of accidents arising in the use of explosives, etc., it is somewhat doubtful if all accidents in that connection are reported. It is noted that 91 per cent of all accidents reported above and causing death or injury arise from this cause. Of the 97 accidents in operations subject to inspection, 62 were unattended by personal injury, while of the other 350 accidents none was free from personal injury.

An appendix gives a chronological list of accidents during the year, with cause, and kind of explosive involved.

Italy.—*Ministero d'Agricoltura, Industria e Commercio. Consiglio superiore del lavoro. I pubblici spettacoli e le provvidenze di legislazione sociale. Rome, 1915. 153 pp. (Pubblicazioni dell'Ufficio del Lavoro, Series B, No. 46.)*

The present work gives in Part I the results of an investigation by Ettore Reina, member of the Superior Labor Council of Italy, into the employment of children in theatrical performances. The investigation was conducted for the principal purpose of obtaining a basis for proposed remedial legislation.

It appears that children not only take part in theatrical performances in Italy but that numerous operatic, comic opera, and dramatic companies are composed exclusively of children of both sexes, 7 to 15 years of age, and that the large opera house (Teatro della Scala) in Milan maintains a ballet school in which the pupils, 9 to 12 years of age, are required to take part in performances and at times to go on the road with the company. Girls 10 to 12 years of age are frequently seen on the vaudeville stage and in circuses as singers, dancers, or acrobats.

Quoted articles from the political, theatrical, pedagogical, and the medical press strongly condemn the exploitation of children for theatrical purposes, while it is stated, on the other hand, that Italian child-labor legislation does not contain any provisions prohibiting such employment of children.

For the purposes of the investigation, schedules were prepared with the cooperation of dramatic and operatic artists' associations and sent to about 200 persons, chiefly theatrical artists, editors of theatrical papers, and dramatic critics of daily papers.

Out of a total of 70 answers received in response to the question as to whether the employment of children of both sexes in a theatrical company is injurious to dramatic art, 65 replies were in the affirmative and 5 in the negative. Sixty-four replies approved the legal regulation of the employment of children in theatrical performances, with 1 negative, while 52 approved, and 13 disapproved, of the regulation of the employment of women therein. Another question as to whether the continuous exercise of an artistic occupation by extremely youthful children of either sex may be injurious to their artistic development, elicited 67 affirmative and 1 negative reply. Various answers were received as to the minimum age which should be required by law for the employment of children in theatrical performances, but striking an average from these replies it appeared to the investigator that 15 years would be the proper minimum age for their admission to employment of that character. This minimum is at present required for the employment of children in unhealthful and dangerous trades.

Part II of the present volume deals with theatrical contracts in general. An introductory chapter gives the results of an investigation into the hygiene of dramatic artists of both sexes, undertaken in 1908 by Dr. A. Peri for the clinic for occupational diseases in Milan. Other chapters of Part II are given over to reprints of resolutions of organizations of theatrical artists urging the enactment of social legislation for the improvement of their conditions, of various typical theatrical contracts, and of the by-laws of existing benevolent associations established in the interests of the theatrical profession and institutions for theatrical artists.

Part III deals with the proposed establishment of arbitration courts (*probiviri*) for the theatrical profession.

Part IV gives the results of an investigation by the Labor Office of theatrical employment agencies and fees charged by them. The existing abuses are discussed and remedial legislation proposed.

New Zealand.—*Registrar general's office. Report on the cost of living in New Zealand, 1891-1914. Wellington, 1915. 168 pp.*

Contains the results of an inquiry into the course of retail prices during the period 1891 to 1914, together with monthly tables showing increases during the war period, July, 1914, to August, 1915. The investigation was begun early in 1914, and as planned was very comprehensive in scope, the desire being to secure by systematic collection data as to variations in prices, wages, unemployment, etc. It was intended to show index numbers of prices, both wholesale and retail, and of import and export values. The investigation into retail prices is here presented separately after having been also published in its main features in current numbers of the Journal of the Department of Labor. The report has, however, it is stated, been carefully revised and in many instances the discussion extended. For the future the index numbers will be published in the Journal.

These index numbers are based on current retail prices collected monthly from fifty retailers in four centers in New Zealand, and weighted according to the average consumption of each article as ascertained by a study of the total average amount consumed in the country during the ten-year period 1905-1914. The ratio from which the index number is developed is found by dividing the total value of the commodities or group of commodities sold in any year by what the value would have been on the basis of prices ruling at some other period selected as the base or point of departure, as it were, from which changes in price levels are to be calculated. Tables are presented with varying base periods according to the availability of the price data in each instance.

For this particular inquiry the commodities were selected and grouped as follows: Group I.—Groceries, including bread, flour, oatmeal, rice, sago, tapioca, tea, coffee, cocoa, sugar, salt, pepper, jam, honey, golden sirup, treacle, raisins, currants, apricots (canned), peaches (canned), peas (canned), prunes (dried), apricots (dried), potatoes, onions, salmon (canned), herrings (canned), starch, blue, soap, tobacco; Group II.—Dairy produce, including milk, butter, cheese, eggs, bacon (shoulder), bacon (middle cut), ham; Group III.—Meat, including beef, sirloin, brisket, prime rib, rump steak, top side, stewing steak, corned round, corned roll, corned brisket; mutton leg, shoulder, loin, neck, chops; pork leg, loin, belly, chops; sausages, beef, pork, tripe; Group IV.—House rent.

Beginning with 1914 returns as to retail prices were received from 25 cities, and a table of index numbers prepared to show the cost of living in New Zealand in 1914 and 1915, each city being given its proper importance or weight in affecting the general price level according to its population. The result is contained in the following table:

INDEX NUMBERS OF RETAIL PRICES IN NEW ZEALAND, 1914-1915, BASED ON RETURNS FROM 25 CITIES.

[Base: Average aggregate annual expenditure in four chief centers, 1909-13=1000.]

Item.	1914				1915	
	First quarter.	Second quarter.	Third quarter.	Fourth quarter.	First quarter.	Second quarter.
Groceries.....	1,039	1,038	1,071	1,078	1,210	1,201
Dairy produce.....	1,042	1,089	1,032	1,017	1,100	1,212
Meat.....	1,107	1,117	1,177	1,221	1,213	1,171
Three food groups.....	1,063	1,077	1,098	1,155	1,186	1,194
House rent.....	986	986	985	985	963	963
Food and rent.....	1,033	1,042	1,056	1,091	1,100	1,105

Increases in prices as a result of the war are shown for the principal food products combined in the statement following, which gives percentage increases in August, 1915, over prices ruling in July, 1914:

PERCENTAGE INCREASE IN PRICES OF 59 FOOD COMMODITIES IN FOUR PRINCIPAL CITIES, JULY, 1914, TO AUGUST, 1915.

Locality.	Increase in per cent in prices of—			
	Groceries.	Dairy produce.	Meat.	Three food groups.
Auckland.....	17.88	13.10	4.69	11.65
Wellington.....	21.30	8.25	7.43	13.20
Christchurch.....	12.91	11.33	15.42	13.44
Dunedin.....	19.13	10.23	8.90	13.53
Average of four cities.....	17.80	10.73	9.11	12.95
Weighted average of Dominion.....	17.13	11.45	9.95	13.36

Sweden.—*Riksförsäkrings-Anstalten år 1914. Stockholm, 1915. 180 pp. (Sveriges officiella statistik.)*

Compulsory accident insurance has covered workmen in the industries of Sweden since January 1, 1903, when the act of 1901, relative thereto, became applicable. Accidents while at work, causing either death or disability lasting over 60 days, render the employer liable to indemnify the injured worker or his survivors. In 1904 a law was passed permitting compensation for injuries of 60 days' duration and less. The employer becomes individually liable for the compensation and may insure his risk either in the State Insurance Institute or he may assume his own risk or place it with private insurance companies. A special act passed in 1908 brought fishermen under the protection of the act, but agricultural laborers continue to be excluded. A special decree in September, 1907, authorized the institute to insure risks other than industrial accidents, and in June, 1909, the State assumed on certain conditions to compensate for accidents and diseases arising in the course of military service. This latter extension of the law became applicable January 1, 1910. The policies of the institute, it should be noted, are what are known as collective policies. The entire cost of administration of the insurance institute is borne by the State.

The publication here listed constitutes the report of the State Insurance Institute for the year 1914 under the act of 1901 and subsequent amendments.

The number of fishermen insured under the decree of 1908 was 1,834 at the end of 1914. Claims for compensation were established in 271 cases under the decree granting accident compensation to persons in the military service. In 85 of these cases sick benefits were paid, disability payments in 76 cases, and compensation for death in 30 instances.

That employers for the most part insure their risk with the State Insurance Institute is shown by the fact that of a total number of 313,976 workmen insured under the act of 1901 at the close of the year 1913, 115,120 were protected by the institute, and in 1914 the corresponding number was 119,621 out of a total of 313,232. Mutual companies appear to be the next most popular form for the insurance of the risk of the employer, as indicated by the fact that 100,149 workmen in 1914 of the total already reported were so insured, the corresponding number for 1913 being 98,578.

More extended information concerning the Swedish system of accident insurance for workmen may be found in the Twenty-fourth Annual Report of the Commissioner of Labor Statistics, Washington, 1909, volume 2, pages 2379 to 2431, and in Bulletin No. 157 of this bureau.

The following is a summary table of the operations of the State Insurance Institute only from the beginning of its operations, January 1, 1903, to December 31, 1914. In order to make the data comparable the preliminary figures for each year as regards the number of accidents reported and compensated have been used.

STATISTICS OF THE SWEDISH STATE INSURANCE INSTITUTE FROM THE BEGINNING OF ITS OPERATIONS, JAN. 1, 1903, TO DEC. 31, 1914.

Items.	1903	1908	1909	1910	1911	1912	1913	1914
Collective policies ¹	1,464	3,539	4,182	4,452	5,045	5,963	7,169	8,003
Workmen insured.....	32,091	70,554	74,513	78,742	87,307	108,630	127,722	135,765
Accidents reported.....	135	² 4,181	4,079	4,778	5,498	7,721	9,101	10,596
Compensated cases.....	56	3,877	4,000	4,475	4,949	6,783	8,251	9,736
Disability.....	51	3,844	3,960	4,432	4,895	6,720	8,175	9,664
Death.....	5	33	40	43	54	63	76	72
Compensation paid for—								
Sick benefits.....	\$696	\$29,421	\$30,119	\$35,915	\$38,995	\$53,972	\$65,441	\$77,406
Disability and death.....	1,289	51,047	57,910	63,809	71,970	78,022	87,336	97,881
Funeral benefits.....	80	531	643	643	933	1,029	1,158	1,222
Assets, Dec. 31.....	85,531	912,391	1,045,444	1,162,313	1,291,985	1,415,018	1,586,100	1,745,211
Liabilities, Dec. 31.....	72,621	865,044	999,873	1,089,374	1,211,639	1,328,876	1,501,402	1,651,702
Premiums.....	47,255	110,145	³ 115,578	³ 121,590	³ 141,510	³ 171,000	³ 211,492	³ 235,005
Cost of administration....	19,834	³ 31,946	³ 36,265	³ 39,046	³ 40,798	³ 44,131	³ 50,577	³ 60,079

¹ Practically the number of establishments insured.

² Large increase due to fact that beginning 1905 insurance could be taken out for accidents of 60 days' duration or less.

³ Includes cost of fishermen's insurance operative since Jan. 1, 1909.

OFFICIAL PERIODICAL PUBLICATIONS RELATING TO LABOR.

LABOR DEPARTMENTS AND BUREAUS.

Austria.—*Soziale Rundschau, Herausgegeben vom K. K. Statistischen Amt im Handelsministerium. Vienna.*

January, 1915.—General labor legislation: Index of social legislation enacted in 1914; Imperial decree of July 25, 1914, relating to punishment of interference with the public service and public establishments, and of the violation of Government contracts; Ministerial order of November 14, 1914, relating to obligatory services for war purposes; Imperial order of December 10, 1914, protecting workmen and salaried employees in bankruptcy procedures. Special labor legislation: Gubernatorial decree of September 6, 1914, regulating in Bohemia the dredging of sand and gravel in the River Moldau; Measures for the uninterrupted continuation of operation of coal mines in Austria (ministerial decree, Nov. 11, 1914); Imperial decree of January 10, 1915, amending the law on mercantile employees. Welfare work for salaried employees. Employers' and employees' associations: Statistics of the trade-unions affiliated with the Austrian Central Federation (Reichskommission) 1913; Activity of the federation of Czecho-Slavic trade-unions, 1913; Activity of the Bohemian national socialist trade-unions, 1913; Statistics of the Christian trade-union movement in Austria, 1913; Statistics of German trade-unions in Austria, 1913. Labor disputes, conciliation and arbitration, and collective agreements. Strikes and lockouts in Austria, 1913. Employment bureaus and unemployment: Statistics of Austrian employment bureaus, August to October, 1914; Measures for the relief of unemployment in Austria; Unemployment among members of Austrian trade-unions, August to November, 1914, August to October, 1914, and September to November, 1914. Working conditions: Working conditions in Austrian salt works, 1912; Statistics of permits for overtime work in Austrian factories, 1913. Workmen's insurance: Regulation of the taxation of salaried employees' insurance institutes; Liability of sick funds for sick benefits to

members called up for military service; Creation of a sick fund for domestic servants in Salzburg; Ministerial decree of November 26, 1914, creating arbitration courts for the miners' accident insurance system; Accident insurance statistics of the establishments of the Austrian Navy; Imperial decree of November 29, 1914, authorizing the workmen's insurance institutes to use their funds for special purposes in the interest of the insured during the war; German Federal decree of November 26, 1914, providing that military service in Austria-Hungary shall be considered equivalent to military service in the German army so far as persons insured in German invalidity insurance institutions are concerned. Social welfare work: Moratorium of private debts (imperial decree, November 25, 1914); Imperial decree of October 10, 1914, authorizing the Government to take economic measures necessitated by the war; Proposal to make direct loans from the State housing fund to public welfare building associations; Statistics of the free public renting bureau in Graz 1913. Review of social and economic literature.

February-April, 1915.—Employment bureaus and unemployment. Organization of public employment offices in Austria during the war; Free railroad transportation in Austria to workmen seeking employment; Statistics of Austrian employment bureaus, November and December, 1914, and January 1915; Simplification of the procedure in granting building permits in order to relieve unemployment; Municipal unemployment fund in Laibach; Aid to unemployed persons of the salaried classes in Austria; Unemployment among members of Austrian trade-unions, October, 1914, to January, 1915. Workmen's insurance: Beginning of operation of the sick fund for domestic servants in Salzburg. Social welfare work: Moratorium for private debts (imperial decree, January 25, 1915); Measures insuring the cultivation of the crops. Imperial decree of February 2, 1915, providing for the seizure of all grain and mill products; Measures for the combating of alcoholism in Austria. Review of social and economic literature.

May, 1915.—General labor legislation: Reemployment of former employees in the postal and state railroad service on their return from the war; Inclusion of the time spent by State railroad employees in military service during the war in the computation of seniority for promotions; The coming into effect of the factory law in Switzerland; New regulation in Greece as to deductions from wages; New woman and child labor regulations in Belgium. Special labor legislation: Postponement of the coming into effect of the new protective regulations for iron and steel works and for the employment of female and juvenile workers in the manufacture of white lead and other lead products in Germany; Extension to Algiers of the French protective legislation for workmen employed in lead factories; Royal decree of April 12, 1914, regulating the hours of labor of tobacco workers in Greece; New South Wales law of July 29, 1914, prohibiting the use of white phosphorus in the manufacture of matches; Notification of the Swiss Government by Norway of the latter's adherence to the international agreement as to the prohibition of the use of white phosphorus in the match industry; Cantonal regulations of June 27, 1914, for the protection of workmen employed on building work in Basel, Switzerland; Cantonal regulations of July 15, 1914, concerning hours of labor of bakers in Basel (canton); Gubernatorial decrees of Moravia and Silesia prohibiting public dances in coal mining districts on pay days and immediate subsequent days; Ministerial decree of January 29, 1915, regulating the closing hours of photographic establishments. Employment bureaus and unemployment: Annual meeting of the national federation of Austrian general employment bureaus, March 6, 1915; Statistics of Austrian employment bureaus, February, 1915; Statistics of the industrial and mercantile free employment bureau in Budapest, 1913; Aid to unemployed persons of the salaried classes in Austria; Unemployment among members of Austrian trade-unions, December, 1914, to March, 1915, and during the year 1914. Workmen's insurance: Model by-laws for substitute pension institutes for salaried employees;

Inclusion of the period of military service during the war in the period governing the computation of sick benefits for workmen in the State railroad service; German Federal decree of March 18, 1915, providing that military service in Austria-Hungary during the war shall be considered equivalent to military service in Germany so far as persons insured in the insurance institute for salaried employees are concerned; Law, July 15, 1914, providing for the liability of employers in case of accidents in lumbering establishments in France; Workmen's accident liability law of May 1, 1914, in Ontario, Canada. Social welfare work: Ministerial decree of March 26, 1915, regulating the consumption of grain and mill products; Ministerial decree of March 27, 1915, providing for the continued payment of part wages to seamen, etc., in the event of the cessation of shipping during the war; Granting of furloughs to persons in the military service for the cultivation of vineyards; Moratorium for private debts (ministerial decree of March 26 and 31, 1915); Ministerial decree of March 31, 1915, prohibiting the sale and purchase of future harvests of agricultural crops; Ministerial decree of April 12, 1915, granting subsistence subsidies to families of workmen drafted for war service in military establishments; Ministerial decree of May 6, 1915, providing for obligatory use of all pasture grounds; Ministerial decrees of May 8, 1915, restricting the meat trade. Review of social and economic literature.

June-July, 1915.—General labor legislation: Conditions for the employment of war prisoners at public, private, and agricultural labor; Law of January 22, 1915, regulating the hours of labor in industrial establishments in Portugal; Royal decree of October 16, 1914, regulating the night work of women in establishments for the canning of sprats in Sweden. Special labor legislation: Law, May 27, 1914, prohibiting the manufacture, importation, use, and sale of matches containing white phosphorus, Canada; Proposed legislation for the prohibition of night work in bakeries in Spain; Law, January 22, 1915, providing maximum hours of labor for mercantile and office employees in Portugal; Vacations for salaried employees; Ministerial order providing that awards of army contracts shall make it obligatory for firms receiving such awards not to reduce their force of salaried employees or their salaries. Labor disputes, conciliation and arbitration and collective agreements: Collective agreements in Germany in force at the end of 1913; Employment bureaus and unemployment in Germany; Ministerial decree establishing the principles for an organization of employment bureaus in Lower Austria for war invalids; Statistics of employment bureaus, March and April, 1915; Unemployment among members of trade-unions, February to May, 1915; Prussian ministerial decree of May 26, 1915, making it obligatory for free employment offices to report to the imperial statistical office the number of applicants and open situations; Resolution of the cantonal council of January 8, 1914, increasing premiums and benefits under the unemployment insurance system as applicable to Basel, Switzerland. Labor offices, advisory labor councils, etc.: Royal decree of November 13, 1914, creating a State advisory council for industries, trades, and commerce in Bavaria. Working conditions: Wage increases for workmen in the government mint and assay office. Social welfare work: Imperial decree of June 12, 1915, providing for the payment by the State of sustenance and pensions to invalid enlisted men and their families and to survivors of enlisted men; Gubernatorial decrees restricting the sale of alcoholic beverages; Imperial decree of May 25, 1915, relating to the moratorium for private debts; Imperial decree of June 21, 1915, insuring sufficient provision of the population with flour and bread; Ministerial decree of July 7, 1915, regulating the sugar trade; Measures to insure the harvesting of the new crops. Review of social and economic literature.

August-September, 1915.—General labor legislation: Gubernatorial decrees of Moravia, Bukowina, and Dalmatia, providing that agricultural servants and laborers can not claim violation of the labor contract by the employer if during the war they

are not furnished with the quantities of the foodstuffs, especially bread and flour, agreed upon in the contract; Royal decree of July 2, 1915, regulating the hygiene and safety of workmen in industrial establishments in the Netherlands; Roumanian law of April 26, 1913, amending the law relating to the organization of the handicrafts, credit and workmen's insurance. Special labor legislation: German federal decree of March 31, 1915, prohibiting night work in bakeries, and of August 12, 1915, restricting the duration of operations in textile establishments; Gubernatorial decree of July 22, 1915, on the early closing of mercantile establishments in lower Austria; Gubernatorial decree of August 7, 1915, on the closing on Sundays of pharmacies in Vienna; Law, November 25, 1914, for the protection of mercantile employees in Chile. Employers' and employees' associations: Statistics of trade-unions affiliated with the Austrian central federation (Reickskommission) of trade-unions, 1914; Statistics of the Christian trade-unions, 1914. Employment bureaus and unemployment: Ministerial decrees defining principles for the organization of employment bureaus in several Provinces for war invalids; Ministerial decree of May 21, 1915, regulating the recruiting of agricultural laborers from refugee settlements in Austria for employment in Germany; Statistics of Austrian employment bureaus, May and June, 1914; Unemployment among members of Austrian trade-unions, April to July, 1915; Statistics of employment bureaus in Sweden, 1914; Law, April 8, 1914, on unemployment funds in Denmark; Proposed legislation in Finland on unemployment funds; Proposed legislation in Norway on unemployment funds; Statistics of unemployment insurance in the Netherlands, 1914. Working conditions: Working conditions in the tobacco industry, 1913. Workmen's insurance: Imperial decree of September 16, 1915, extending to Austrian citizens who are members of miners' funds and are in the military service of Germany during the present war the same rights to which members in the military service of Austria are entitled. Social welfare work: Ministerial decree of July 27, 1915, regulating the pensions of enlisted men disabled in the war; Imperial decree of August 29, 1915, providing for subsequent medical treatment and practical training of disabled or wounded ex-soldiers; Ministerial decree of July 23, 1915, providing for the seizure of all supplies of legumes; Imperial decree of August 7, 1915, against excessive prices of foodstuffs; Gubernatorial decrees restricting the sale of alcoholic beverages; Ministerial decree of August 28, 1915, relating to a moratorium for private debts; Granting of furloughs to engineers and firemen in military service so that their services may be used for the operation of harvesting and plowing machines; Proposed statistics of Austrian soldiers disabled in the war. Review of social and economic literature.

Canada.—*The Labor Gazette issued by the Department of Labor by order of Parliament. Ottawa.*

December, 1915.—Notes on current matters of industrial interest; Industrial and labor conditions during November, 1915; Reports of local correspondents; Reports of women correspondents; Industrial disputes investigation act, 1907, proceedings during November, 1915; Western coal operators' association and district No. 18, U. M. W. A.—settlement of dispute at Kipp mines; Summary of report on industrial disputes laws issued by the State of Victoria, Australia; Recent workmen's compensation legislation in the Union of South Africa and Victoria, Australia; Manitoba legislation affecting labor, 1915; Ontario labor legislation, 1915; Reports of employment bureaus; Prices, wholesale and retail, Canada, November, 1915; Fair wages schedules in Government contracts, November, 1915; Trade disputes, November, 1915; Industrial accidents, November, 1915; Immigration and colonization; Building permits, November, 1915; Recent industrial agreements; Reviews; Recent legal decisions affecting labor.

Denmark.—*Statistiske Efterretninger, udgivet af det Statistiske Department. Copenhagen.*

December 1, 1915 (No. 24).—Household expenditures of families of small means, October, 1915; Retail prices, November, 1915.

December 9, 1915 (No. 25).—Income and property tax assessment, 1915–1916; Standard rations for milch cows; Privately owned railroads, 1914–15; Unemployment, September, 1915.

Germany.—*Reichs-Arbeitsblatt, Herausgegeben von Kaiserlichen Statistischen Amte, Abteilung für Arbeiterstatistik. Berlin.*

November, 1915.—Labor market in Germany, October, 1915; Labor market in Greater Berlin, October, 1915; Labor market in foreign countries (Great Britain, Switzerland, Norway, British colonies); Employment offices and unemployment; Unemployment in foreign countries (Netherlands, August, 1915; Denmark, August, 1915; Massachusetts, end of June, 1915); Distribution, by age classes, of the male members of the local sick fund of Berlin during the war; Interior colonization during the war. Labor legislation: Federal decree of October 29, 1915, relating to the operation of iron and steel works; Federal decree of November 7, 1915, limiting the hours of labor in textile establishments; Statistics of industrial and commercial continuation schools in Greater Berlin and the Rhenish-Westphalian industrial district; Strikes and lockouts in the German Empire, third quarter, 1915; Statistical tables of the labor market.

Great Britain.—*The Board of Trade Labor Gazette. London.*

December, 1915.—Employment chart; The labor market; Special articles on employment in Germany in October; Retail food prices in the United Kingdom, Berlin, Italy; The food and raw material requirements of the United Kingdom; Mobilization of industrial establishments in Italy; Industrial canteens; Sunday labor in munition works; Reports on employment in the principal industries. Labor in the Dominions and in foreign countries: Germany, Austria-Hungary, Norway, Italy, Russia, United States. Board of trade labor exchanges. Statistical tables. Trade disputes; Changes in rates of wages; Distress committees; Pauperism; Prices of wheat, flour, and bread; Immigration and emigration to and from the United States; Diseases of occupations; Fatal industrial accidents; Unemployment insurance; Foreign trade; Cooperative wholesale societies, quarterly sales; Passenger movement to and from the United Kingdom. Legal cases, official notices, etc.

Italy.—*Bollettino dell' Ufficio del Lavoro, Ministero di Agricoltura, Industria e Commercio. Rome. (Monthly.)*

August, 1915.—Operations of employment bureaus; Labor market in foreign countries: Argentine, 1913. Cost of living for workmen's families in Buenos Aires, 1913; Labor disputes in Italy, second quarter, 1915; Statistics of workmen employed on public works in January, February, and March, 1915; Retail prices of farm products and foods generally consumed by workmen's families, July, 1915. Labor legislation in foreign countries—Belgium: Decree of the governor general of December 15, 1914, amending the women and child labor law; France: Law of July 10, 1915, amending title III and IV of the Labor Code (minimum wages for homeworkers in the clothing industry); Switzerland: Federal law of June 18, 1915, amending the federal law of June 13, 1911, on sickness and accident insurance. Digests of monographs relating to labor; Home work in Buenos Aires; Collective agreements in Italy.

———. (Semimonthly.)

November 16, 1915.—Investigations and provisions relative to unemployment; Labor market by localities and industries; Labor disputes; Employers' and employ-

ees' associations; Congresses and conventions; Labor legislation; Decree of October 17, 1915, relating to insurance against accidents of the crews of merchant vessels; Decree of October 17, 1915, amending the seamen's invalidity insurance law; Decree of October 31, 1915, postponing the election of prudhommes; Decree of November 11, 1915, relating to the extension and rescission of agricultural contracts; Activities of the labor office; Enforcement of social legislation; Regulations for the enforcement of the decree of March 17, 1915, requiring a uniform grade of bread; Industrial accident insurance in territories occupied by the Italian army; Court decisions relating to labor.

December 1, 1915.—Investigations and provisions relative to unemployment; Labor market by localities and industries; Employers' and employees' associations; Congresses and conventions; Labor disputes; Retail prices and index numbers of foodstuffs in Italy, October, 1915; Retail prices of foodstuffs in Italian cities (first 6 months, 1914, July, 1914, January, July, and October, 1915); Retail prices of foodstuffs in foreign countries: Great Britain (July, 1914, to November, 1915), Germany (July, 1914, to September, 1915), Austria (July, 1914, to August, 1915); Activities of the labor office; Labor legislation: Decree of October 31, 1915, relating to supplementary premiums for war risks in workmen's accident insurance.

Netherlands.—*Maanschrift van het Centraal Bureau voor de Statistiek. The Hague.*

November, 1915.—Review of labor market, October and November, 1915; Unemployment in Rotterdam, August 1, 1914, to May 1, 1915 (relative figures); Unemployment and unemployment insurance; Labor exchanges; Strikes and lockouts; Wages and hours of labor; Workmen's and employers' organizations; Average prices of bread in all cities having a population of 10,000 or more inhabitants, 1903-1915; Wholesale and retail prices; Canada labor exchanges; Court decisions. Miscellaneous reports: Statistics of population, workmen's dwellings, industrial accidents (1903-1915), commerce, etc.; Résumé of war measures; Proposed amendments of social insurance laws; Court decisions relative to contracts, marriage, and other economic and social questions. International: Wholesale and retail prices in European countries; Strikes and lockouts, Australia, Canada, France, Great Britain, Italy, and Spain; Labor disputes in Denmark and Sweden; Cooperative societies in France; Cost of living in Switzerland; Statistical tables of the labor market; occupational diseases, etc.

New Zealand.—*Journal of the Department of Labor, Wellington.*

November, 1915.—Labor; Conditions of employment and trade; Women's employment branches (reports); Unions' reports; Recent legal decisions; Recent legal decisions affecting labor in Great Britain; Cases under Workers' Compensation Act. Statistics: Persons assisted to employment during October, 1915; Additional associations and unions registered under the Industrial Conciliation and Arbitration Act, 1908; Cooperative works in New Zealand; Accidents in factories reported up to October 27, 1915; Accidents reported under the Scaffolding Inspection Act; Current retail prices, October 15, 1915. Special articles on new measures in Germany against excessive prices of food (Board of Trade Labor Gazette); Compulsory associations in the German coal-mining industry (Board of Trade Labor Gazette).

Pennsylvania.—*Monthly Bulletin of the Pennsylvania Department of Labor and Industry. Harrisburg.*

September, 1915.—Group insurance; Statement of all accidents reported during August, 1915; Bureau of Employment of Department of Labor and Industry; Safe emergency exits for audiences; Value of signs in accident prevention; The safety movement; Waste packing material; Proceedings of second annual conference on welfare and efficiency (continued from August Bulletin).

October, 1915.—Pennsylvania's relation to industrial safety and health; Districts established for enforcement of workmen's compensation act; State employment bureau; Some facts about workmen's compensation and the State workmen's insurance fund; Accidents reported during September, 1915; Volunteer firemen as ushers in tabernacles for evangelistic campaigns; The Erie flood and its lesson; Safety standards of the industrial board—foundries; Proceedings of the second annual welfare and efficiency conference (continued from September Bulletin).

Spain.—*Boletín del Instituto de Reformas Sociales. Publicación Mensual. Madrid.*

November, 1915.—Report of the secretary's office and of the special divisions; Strikes in 1913, and in October, 1915; Retail prices in various provinces, October, 1914, to March, 1915; Conventions and congresses. Legislation. Establishment of technical schools (continued); Reductions in import duties; Appointment of a commission of women to investigate the manufacture and supply of bread and the development of the bread-baking industry; Duty on grain; Prohibition of export of cattle; Proposed legislation. Foreign notes: Strikes and lockouts in 1914, in Great Britain; Amendments to the French Labor Code, book 1 (minimum wage law).

Sweden.—*Sociala Meddelanden utgivna av K. Socialstyrelsen. Stockholm.*

No. 11, 1915.—Conditions of the labor market according to reports from employers, third quarter, 1915; Trade union unemployment, July 1, August 1, and September 1, 1915; Movement of employment in shipping, August 1, 1914, to July 31, 1915; Measures to offset the high cost of living; Collective agreements, 1914; Problem of a guaranteed time rate under a piece-rate system; Proposals by the Norwegian commission relative to the sale of alcoholic liquors; Strikes and lockouts, third quarter, 1915; Activities of the factory inspectors, July to September, 1915; Reports of the factory inspectors on fatal industrial accidents. Brief notices. Labor disputes in Denmark, 1914; Report of the State Insurance Institute, January to October, 1915; Amendment to the Danish law on relief for the children of widows; Relief works in Malmö; Labor market in England and in Germany, October, 1915; Emigration from Sweden, third quarter, 1915; Sales of the Cooperative Federation, first six months, 1915; Housing conditions in small dwellings in Christiania; Comparative housing conditions in large Scandinavian cities; Housing conditions in rural localities in Denmark, 1911; Housing and a housing census in Gothenburg; National Federation of trade Unions, 1914; Items relative to the liquor problem in Örebro and Upsala; Danish poor relief, 1911–1912; Cost of living among office and commercial employees in Norway; Minimum wage for women in the clothing industry in France; Census of domestic animals; Municipal sale of coal at Malmö; Measures to relieve the high cost of living in Norway. Public employment exchanges in Sweden, October, 1915; Retail prices and cost of living in Sweden, 1904, to October, 1915; Prices of cattle on the hoof, 1904 to October, 1915; Fish prices in Stockholm, October, 1914, 1915; Reports from the Royal pension bureau.

International Labor Office (Basel, Switzerland).—*Bulletin des Internationalen Arbeitsamtes. Jena, 1915.*

[The German edition of this bulletin, which appears also in French and English, is the earliest published and its contents are therefore here listed.]

Nos. 9 and 10.—National labor legislation—**Australia: Australian Commonwealth:** Act, December 22, 1911, amending the Commonwealth electoral act, 1902–1909; Act, October 29, 1912, amending the sugar-bounty act, 1905–1910; Act, November 6, 1912, granting and applying out of the consolidated revenue fund a sum for invalid and old-age pensions; Act, November 6, 1912, amending the referendum (constitutional alteration) act, 1906–1910; Act, December 24, 1912, repealing the sugar-bounty

act, 1905-1912; Act, December 24, 1912, amending sections 4, 16, 22 to 27, 40, and 49 of the invalid and old-age pensions act, 1908-1909, and amending that act in relation to blind persons and the punishment of offenses; Act, December 24, 1912, amending the manufactures encouragement act, 1908; Act, December 24, 1912, relating to compensation to workmen employed in the service of the Commonwealth for injuries suffered in the course of their employment; Act, December 24, 1912, providing for bounties on wood pulp and rock phosphate and rewards for the discovery of rock phosphate; Act, December 24, 1912, relating to the interstate commission; Act, December 24, 1912, amending the bounties act, 1907; The immigration act of December 24, 1912; Provisional regulations under the wood pulp and rock phosphate bounties act, 1912, April 4, 1913; Act, October 24, 1913, relating to navigation and shipping; Act, December 19, 1913, providing for the construction of a railway in the Northern Territory from Pine Creek to Katherine River, the appointment of officers, the making of charges, and the appropriation of money in connection with such railway; Acts, October 10, and December 7, 1914, amending the Commonwealth conciliation and arbitration act, 1904-1911; Act, December 21, 1914, providing for the payment of a bounty on the manufacture of pig iron from Australian ore; Act, December 21, 1914, granting and applying out of the consolidated revenue fund a sum for invalid and old-age pensions. **New South Wales:** Act, September 23, 1908, authorizing payments in subvention of friendly societies in certain cases, and for purposes consequent thereon or incidental thereto; Act, August 19, 1910, amending the law with respect to compensation to workmen for injuries suffered in the course of their employment and for purposes consequent thereon or incidental thereto; Act, August 27, 1910, providing superannuation allowances and gratuities for persons employed in the railway and tramway services; amending the acts regulating the public service and the Government railway act, 1901, and for purposes consequent thereon or incidental thereto; Act, August 27, 1910, providing for a Saturday half holiday every Saturday in shops, amending the law with regard to the early closing of shops, and for purposes consequent thereon or incidental thereto; Act, August 27, 1910, amending the miners' accident relief acts, 1900 and 1901, and for other purposes; Act, December 20, 1910, to amend the early closing acts and the Saturday-half-holiday act, 1910, and for purposes consequent thereon; Act, December 28, 1910, amending the coal mines regulation act, 1902, and for other purposes; Ministerial order, May 16, 1911 (prohibition of employment of males under the age of 16 years or of females); Act, July 12, 1911, repealing the old-age pensions act, 1900, and the invalidity and accidents pensions act, 1907; Act, April 4, 1912, to provide for the purchase, resumption, and appropriation of lands, and for the construction and maintenance of certain buildings and works; for the use and disposal of such lands and buildings; to constitute a board for the above and other purposes, and a fund to meet the expenses of carrying out the above provisions, for purposes consequent thereon or incidental thereto; and to amend certain acts; Act, April 4, 1912, to enable the municipal council of the city of Sidney to erect and let dwelling houses, and for that purpose to acquire land; to extend the borrowing powers of the said council; to amend certain acts relating to the corporation of the city of Sidney; and for purposes consequent thereon or incidental thereto; Act, November 26, 1912, consolidating enactments relating to the regulation of coal mines and collieries; Act, November 26, 1912, consolidating the acts controlling scaffolding and lifts; Act, November 26, 1912, to consolidate the enactments relating to the supervision and regulation of factories, bakehouses, laundries, dye works, and shops; the limitation in certain cases of the hours of working therein; the extension of the liability of employers for injuries suffered by employees in certain cases; the making provision for a minimum wage for certain persons, and for the payment of overtime and tea money; and for other purposes; Act, November 26, 1912, consolidating the laws relating to banks and bank holidays; Act, November 26, 1912, consolidating the acts

relating to friendly societies; Amendment of December 14, 1912, of schedule of industrial arbitration act, 1912; Act, December 20, 1912, amending the miners' accident relief act, 1900, the miners' accident relief (amendment) acts 1901 and 1910 and for other purposes; Act, January 7, 1913, amending the friendly societies' (amendment) act, 1906; Regulations of April 29, 1913, under the factories and shops act, No. 39, 1912; Act, October 15, 1913, amending the coal mines regulation act, 1912, bringing certain persons under the public service act, 1902; and for purposes consequent thereon and incidental thereto; Act, February 9, 1915, prohibiting the use of white phosphorus in the manufacture of matches; prohibiting the sale of matches made with white phosphorus; amending the factories and shops act, 1912, and for other purposes consequent thereon or incidental thereto. **Queensland:** Act, December 22, 1909, to enable the Government to assist persons in receipt of small incomes to provide homes for themselves; Act, December 29, 1909, amending the workers' compensation act of 1905, by extending its provisions to cases of disablement for three days or upward, by extending the time during which compensation shall be payable; Regulations of February 23, 1910, under the workers' dwellings act of 1909; Act, January 7, 1911, making better provisions for the regulation and inspection of mines; Act, October 26, 1911, authorizing the construction and establishment of sugar works by means of moneys advanced by the State, and providing for the repayment of such moneys and for the maintenance, management, and control of such sugar works, and for other purposes connected therewith; Act, November 30, 1911, consolidating and amending the law relating to institutional children; Act, January 9, 1912, amending sections 5 and 7 of the workers' dwellings act of 1909 in certain particulars; Regulations, July 18, 1912, under the State (institutional) children act of 1911; Act, December 5, 1912, making provision for holidays and for other purposes connected therewith and repealing the "bank holidays acts 1904-1906"; Act, December 7, 1912, making better provisions for industrial peace and for purposes incidental to that object; Act, December 7, 1912, amending "the inspection of machinery and scaffolding act of 1908"; Regulations, March 20, 1913, under "the industrial peace act of 1912"; Regulations, May 29, 1913, under "the inspection of machinery and scaffolding acts, 1908-1912"; Act, October 29, 1913, consolidating and amending the law relating to friendly societies; Act, October 23, 1914, amending "the factories and shops act of 1900" in a certain particular. **Norway:** Law, August 6, 1915, relating to labor disputes; Law, September 18, 1915, relating to the protection of workmen in industrial establishments. **Sweden:** Law, October 18, 1912, amending article 2 of the law of November 20, 1909, prohibiting the employment of women at night work in specified industrial establishments. **War Measures:** German Empire, Prussia, Hungary, Belgium, Spain, France, Great Britain and Ireland, British Colonies (Commonwealth of Australia; New South Wales, Victoria, South Australia, New Zealand), Roumania, Russia, Switzerland.

MISCELLANEOUS.

Austria.—*Amtliche Nachrichten des k. k. Ministeriums des Innern betreffend die Unfallversicherung und die Krankenversicherung der Arbeiter.* Vienna.

November, 1915.—Accident insurance; Election and appointment of officers of the workmen's accident insurance institutes and courts of arbitration; Decisions of courts of arbitration. Sickness insurance. Decisions of the administrative court.

Germany.—*Amtliche Nachrichten des Reichsversicherungsamts.* Berlin. (Monthly.)

August 15, 1915.—Official—General part. Decree, August 12, 1915, of the Imperial chancellor, providing for the extension of the term of office of the present representatives of employers and workmen before insurance authorities and insurance carriers; Circular letter, August 15, 1915, of the Imperial Insurance Office, instructing the

boards of directors of State insurance institutes and trade accident associations as to the legal aid they may request from public authorities. Accident insurance: Decisions on appeals; Decisions of the decision senates. Sickness, invalidity, and survivors' insurance. Circular order, June 2, 1915, of the Imperial Insurance Office instructing the boards of directors of the invalidity insurance institutes as to the method of accounting for excess or reduced payments in the case of refunds of loans; Decisions on appeals; Decisions of the decision senates; Other decisions; Disbursements of the invalidity insurance institutes, June, 1915, for pensions and benefits, to insured persons and their survivors; Receipts in July, 1915, from the sale of contribution stamps.



MONTHLY REVIEW

OF THE

U. S. BUREAU OF LABOR STATISTICS

VOL. II—NO. 3

WASHINGTON

MARCH, 1916

FEDERAL EMPLOYMENT WORK OF THE DEPARTMENT OF LABOR.

During January, 1916, the Division of Information of the Department of Labor placed 3,419 persons in employment as compared with 2,170 during December, 1915. As there were 15,015 applicants for work, 22.78 per cent were placed as compared with 18.23 per cent for December preceding. The operations of the division by months since May, 1915, when fuller reports began to be made, are contained in the following statement:

OPERATIONS OF THE DIVISION OF INFORMATION, BUREAU OF IMMIGRATION,
DURING THE MONTHS OF MAY, 1915, TO DECEMBER, 1916.

Month.	Number of applica- tions for help.	Number of persons ap- plied for.	Number of applicants for places.	Number referred to employ- ment.	Number actually employed.	Per cent of appli- cants placed.
1915						
May.....	638	3,826	12,132	3,752	3,495	28.81
June.....	1,249	3,601	14,530	5,131	4,646	31.98
July.....	1,160	8,665	18,061	6,360	6,035	33.41
August.....	1,279	7,931	17,827	7,321	6,757	37.90
September.....	1,201	4,551	13,334	5,671	5,405	40.54
October.....	1,104	5,423	12,215	5,460	5,006	40.98
November.....	847	4,650	11,908	4,459	4,146	34.82
December.....	698	3,588	11,902	2,622	2,170	18.23
1916						
January.....	933	5,063	15,015	4,300	3,419	22.78

The following statement of the employment work of the 18 separate zones of operation covering the whole country gives the usual details for December, 1915, and January, 1916:

2 MONTHLY REVIEW OF THE BUREAU OF LABOR STATISTICS.

SUMMARY OF ACTIVITIES FOR THE MONTHS OF DECEMBER, 1915, AND JANUARY, 1916.

Zone.	Opportunities received.				Applications for employment.					
	Applications for help.		Number of persons applied for.		Applications received.		Referred to employment.		Number actually employed.	
	De-cem-ber.	Janu-ary.	De-cem-ber.	Janu-ary.	De-cem-ber.	Janu-ary.	De-cem-ber.	Janu-ary.	De-cem-ber.	Janu-ary.
1. Boston, Mass.....	1	2	15	3	52	44	.....	1	.....	1
Portland, Me.....	.....	.....	.....	.....	4	3	.....	.....	.....	.....
Total.....	1	2	15	3	56	47	.....	1	.....	1
2. New York, N. Y.....	87	91	276	186	921	1,069	284	431	236	332
Buffalo, N. Y.....	6	83	10	730	298	830	131	685	41	449
Total.....	93	124	286	916	1,219	1,899	415	1,116	277	781
3. Philadelphia, Pa.....	28	71	551	773	839	559	359	271	303	231
Pittsburgh, Pa.....	9	19	1,228	1,381	124	977	57	428	26	174
Total.....	37	93	1,779	2,154	963	1,536	416	699	329	405
4. Baltimore, Md.....	5	21	23	33	246	354	182	264	182	264
5. Norfolk, Va.....	3	12	3	92	36	64	20	15	17	20
6 Jacksonville, Fla.....	.....	.....	.....	.....	19	34	.....	1	.....	1
Miami, Fla.....	5	17	6	64	121	93	5	18	5	9
Charleston, S. C.....	3	2	61	12	25	59	58	2	58	1
Savannah, Ga.....	3	8	27	33	36	55	27	32	26	24
Mobile, Ala.....	.....	.....	.....	.....	8	14	.....	.....	.....	.....
Total.....	11	27	94	109	209	255	90	53	89	35
7. New Orleans, La.....	3	7	4	7	11	36	6	12	3	3
Gulfport, Miss.....	2	.....	2	.....	12	17	.....	.....	.....	.....
Memphis, Tenn.....	.....	1	.....	1	.....	44	.....	.....	.....	.....
Total.....	5	8	6	8	23	97	6	12	3	3
8. Galveston, Tex.....	2	5	3	6	41	93	5	1	5	.....
Amarillo, Tex.....	.....	.....	.....	.....	.....	6	.....	.....	.....	.....
Houston, Tex.....	.....	.....	.....	.....	.....	159	.....	.....	.....	.....
Laredo, Tex.....	.....	1	.....	1	.....	1	.....	1	.....	1
Albuquerque, N. Mex.....	.....	1	.....	1	.....	6	.....	.....	.....	.....
Total.....	2	7	3	8	41	265	5	2	5	1
9. Cleveland, Ohio.....	25	23	146	82	149	126	39	38	17	15
10. Chicago, Ill.....	31	76	258	654	4,436	5,299	501	1,083	461	1,032
Detroit, Mich.....	.....	.....	.....	.....	84	77	9	19	5	14
Sault Ste. Marie, Mich.....	7	9	8	45	54	44	8	14	8	14
Indianapolis, Ind.....	18	31	103	159	239	279	114	148	105	138
Total.....	56	116	369	858	4,813	5,699	632	1,264	579	1,198
11. Minneapolis, Minn.....	16	32	19	36	43	36	13	13	13	13
12. St. Louis, Mo.....	8	9	71	18	174	212	109	16	73	15
Kansas City, Mo.....	13	13	57	45	329	317	85	45	44	45
Total.....	21	22	128	63	503	529	194	61	117	60
13. Denver, Colo.....	1	6	1	7	36	72	1	30	.....	3
Salt Lake City, Utah.....	.....	.....	.....	.....	6	10	.....	.....	.....	.....
Total.....	1	6	1	7	42	82	1	30	.....	3
14. Helena, Mont.....	.....	2	.....	2	13	21	2	1	.....	.....
Moscow, Idaho.....	1	.....	10	.....	.....	.....	7	5	.....	.....
Total.....	1	2	10	2	13	21	9	6	.....	.....

SUMMARY OF ACTIVITIES FOR THE MONTHS OF DECEMBER, 1915, AND JANUARY, 1916—Concluded.

Zone.	Opportunities received.				Applications for employment.					
	Applications for help.		Number of persons applied for.		Applications received.		Referred to employment.		Number actually employed.	
	De-cem-ber.	Janu-ary.	De-cem-ber.	Janu-ary.	De-cem-ber.	Janu-ary.	De-cem-ber.	Janu-ary.	De-cem-ber.	Janu-ary.
15. Seattle, Wash.....	22	23	28	25	527	346	27	24	26	22
Aberdeen, Wash.....	6	6	17	33	229	142	17	33	17	33
Bellingham, Wash.....	2	.....	2	.....	25	47	2	.....	1	.....
Everett, Wash.....	1	2	1	3	21	28	3	5	3	3
North Yakima, Wash.....	84	62	114	103	196	196	114	103	113	103
Spokane, Wash.....	13	3	24	3	135	79	16	2	16	2
Tacoma, Wash.....	4	7	5	16	38	141	5	16	5	16
Walla Walla, Wash.....	18	13	18	16	84	129	19	12	19	12
Total.....	150	116	209	199	1,255	1,098	203	195	200	191
16. Portland, Oreg.....	3	5	4	22	149	96	3	20	3	18
17. San Francisco, Cal.....	156	183	325	227	1,342	1,600	224	221	182	177
Fresno, Cal.....	.....	.....	.....	.....	5	.....	.....	.....	.....	.....
Total.....	156	183	325	227	1,347	1,600	224	221	182	177
18. Los Angeles, Cal.....	.....	5	.....	6	295	432	.....	5	.....	4
San Diego, Cal.....	110	126	166	235	499	774	170	285	157	230
Tucson, Ariz.....	2	3	2	3	1	5	.....	.....	.....	.....
Total.....	112	134	168	244	795	1,211	170	290	157	234
Total for month.....	698	933	3,588	5,063	11,902	15,015	2,622	4,300	2,170	3,419

CONCILIATION WORK OF THE DEPARTMENT OF LABOR,
JANUARY 16 TO FEBRUARY 15, 1916.

On the authority contained in the organic act of the department to mediate in labor disputes and to appoint commissioners of conciliation in its discretion, the Secretary of Labor, through the commissioners of conciliation, exercised his good offices in five labor disputes between January 16, 1916, and February 15, 1916. The establishments involved in these controversies, the number of employees affected, and the results secured, so far as available, are shown in the following statement:

NUMBER OF LABOR DISPUTES HANDLED BY THE DEPARTMENT OF LABOR
THROUGH ITS COMMISSIONERS OF CONCILIATION, JAN. 16, 1916, TO FEB. 15, 1916.

Name.	Workmen affected.		Result.
	Directly.	Indirectly.	
Bradford Mills, Philadelphia, Pa.....	175	900	Adjusted.
Brewery workers, Washington, D. C.....	.....	.....	Pending.
Clerks, the Big Four R. R.....	58	680	Unable to adjust.
Allied shopmen, Cincinnati, Hamilton & Dayton R. R., Cincinnati, Ohio.	1,200	.....	Pending.
Musical Instrument Manufacturers and Metal Polishers, Elkhart, Ind.	456	751	Do.

There has been an adjustment in the following cases which were noted in the statement dated January 15, 1916:

Shirt-waist workers, Philadelphia, Pa., 5,000 directly and 5,000 indirectly involved.

New Haven Clock Co., New Haven, Conn., 40 directly involved.

IMMIGRATION DURING 1915.

Although it is doubtless true that the large decline in immigration during 1915 and the latter half of 1914 is due to the occurrence of the war in Europe, yet it is noticeable that an actual decline in immigration to the United States began in January, 1914. This decline continued during all of the months of 1914, as compared with 1913, but became very sudden in June, 1914, when the number of immigrant aliens admitted fell from 107,796 in May to 71,728 in June, the corresponding figures for 1913 being 137,262 and 176,261. It is noted in passing that these figures relate to immigrant aliens admitted or emigrant aliens departing as the case may be, as distinguished from all aliens arriving or departing from the United States, which latter would include transient itinerant arrivals as well as from permanent arrivals for purposes of residence.

Grouping the results of immigration by six-month periods during each of the years 1913, 1914, and 1915, the numbers admitted and departing and the excess of admissions over departures during each preceding semiannual period are as follows:

NUMBER OF ALIENS ADMITTED TO AND DEPARTING FROM THE UNITED STATES
JAN. 1, 1913, TO DEC. 31, 1915.

Semiannual period.	Aliens admitted.	Aliens departed.	Excess of aliens admitted.
January to June 30, 1913.....	786,159	284,082	502,077
July to December 31, 1913.....	830,744	314,864	515,880
January to June 30, 1914.....	572,337	318,941	253,396
July to December 31, 1914.....	275,894	255,437	20,457
January to June 30, 1915.....	158,350	117,737	40,613
July to December 31, 1915.....	169,291	166,899	2,392

These figures show quite clearly that the decline in immigration had begun prior to the outbreak of the European war and was probably a reflection of industrial conditions prevailing in the United States.

The table which follows shows the actual number of immigrant aliens admitted and emigrant aliens departing and the excess of the number admitted over the number departing for each of the years 1913, 1914, and 1915, by months.

IMMIGRANT ALIENS ADMITTED AND EMIGRANT ALIENS DEPARTING DURING THE YEARS ENDING DECEMBER 31, 1913, 1914, AND 1915, BY MONTHS.

Month.	1913			1914			1915		
	Ad-mitted.	De-parted.	Differ-ence.	Ad-mitted.	De-parted.	Differ-ence.	Ad-mitted.	De-parted.	Differ-ence.
January.....	46,441	29,730	16,711	44,708	34,216	10,492	15,481	17,238	¹ 1,757
February.....	59,156	15,253	43,903	46,873	17,074	29,799	13,873	7,086	6,787
March.....	96,958	15,044	81,914	92,621	13,500	79,121	19,263	7,755	11,508
April.....	136,371	18,331	118,040	119,885	22,801	97,084	24,532	8,331	16,201
May.....	137,262	19,131	118,131	107,796	23,544	84,252	26,069	8,747	17,322
June.....	176,261	22,930	153,331	71,728	38,413	33,315	22,598	10,830	11,768
July.....	138,244	26,434	111,810	60,377	28,601	31,776	21,504	9,861	11,643
August.....	126,180	23,242	102,938	37,706	30,307	7,399	21,949	29,293	¹ 7,344
September.....	136,247	19,241	117,006	29,143	18,212	10,931	24,513	22,156	2,357
October.....	134,140	26,998	107,142	30,416	20,046	10,370	25,450	13,887	11,563
November.....	104,671	27,632	77,039	26,298	23,100	3,198	24,545	14,483	10,062
December.....	95,387	30,243	65,144	20,944	23,821	¹ 2,877	18,901	10,974	7,927
Total.....	1,387,318	274,209	1,113,109	688,495	293,635	394,860	258,678	160,641	98,037

¹ Excess of departed aliens.

The first table following shows the number of aliens admitted classified by races for each month of the year 1915, total for the year and for 1914, while the second table shows, for 1915, immigrants admitted, classified according to occupations.

IMMIGRANT ALIENS ADMITTED EACH MONTH DURING THE YEAR ENDING DECEMBER 31, 1914, BY RACES.

Race.	Janu- ary.	Febru- ary.	March.	April.	May.	June.	July.	August.	Septem- ber.	Octo- ber.	Novem- ber.	Decem- ber.	Year ending Decem- ber 31, 1915.	Year ending Decem- ber 31, 1914.
African (black).....	113	89	159	256	317	487	486	337	424	491	331	174	4,154	8,271
Armenian.....	44	26	63	29	35	41	30	72	51	55	90	43	578	2,511
Bohemian and Moravian.....	153	82	316	243	266	258	419	301	294	528	72	48	845	4,885
.....	225	136	135	142	213	293	357	246	127	311	164	210	3,055	10,433
.....	37	51	53	107	90	78	54	84	76	65	110	96	2,566	2,264
.....	78	70	85	97	188	432	454	493	523	340	257	106	911	9,373
.....	5	5	3	8	17	12	12	17	4	27	8	12	3,127	3,583
.....	422	553	499	605	626	294	543	568	472	332	782	665	6,360	1,872
.....	1	6	5	1	7	6	11	6	5	17	4	8	76	117
.....	2,232	2,187	2,243	2,902	2,682	3,099	3,787	2,925	3,516	3,608	3,540	2,874	34,543	45,073
.....	114	156	250	213	418	308	341	342	335	369	307	644	3,941	6,868
.....	681	686	820	1,114	1,139	889	834	1,060	1,563	1,849	2,200	1,215	14,134	14,808
.....	1,069	890	928	1,176	1,168	1,034	798	931	1,024	823	1,092	989	11,991	48,747
.....	915	313	1,188	989	2,460	998	2,314	2,180	1,739	2,219	853	521	17,009	37,184
.....	753	641	733	685	768	811	1,357	1,425	1,202	1,180	1,578	1,230	12,209	71,183
.....	967	923	1,097	2,075	2,050	2,485	1,530	1,701	2,303	2,841	2,896	1,149	22,060	39,430
.....	734	657	670	1,087	1,046	2,485	423	2,448	2,532	484	431	191	7,066	24,638
.....	2,994	2,448	3,118	5,480	4,896	2,358	1,913	1,318	2,028	1,958	2,441	941	31,831	128,968
.....	651	668	902	862	792	723	908	899	664	737	590	626	8,786	8,808
.....	16	.....	8	7	3	8	11	13	12	7	7	1	90	184
.....	35	16	57	23	18	36	35	65	57	36	53	39	469	7,703
.....	44	38	30	33	40	44	64	88	98	60	102	115	731	28,349
.....	712	494	906	686	806	1,076	1,121	1,098	765	1,052	1,006	1,538	11,322	11,789
.....	2	2	2	2	2	2	2	2	2	2	2	1	7	2
.....	87	101	163	167	275	229	320	367	335	199	339	477	3,079	42,963
.....	116	70	434	799	347	548	756	522	1,308	1,029	608	1,076	7,965	7,229
.....	24	6	41	50	53	37	41	63	67	47	82	90	601	14,007
.....	107	128	155	100	248	306	330	332	264	369	449	650	3,389	19,385
.....	59	28	124	117	88	144	160	201	215	98	94	71	1,399	14,490
.....	666	1,107	1,886	2,236	2,006	1,873	1,027	1,652	1,722	1,832	1,318	1,280	18,503	31,373
.....	378	1,731	943	1,010	1,004	1,126	1,937	1,069	1,277	1,264	1,330	1,030	12,618	16,606
.....	25	26	6	27	13	12	42	22	51	24	99	66	417	11,823
.....	252	276	436	469	699	747	426	505	698	846	597	471	6,108	7,894
.....	100	56	173	157	213	139	143	166	192	197	119	84	1,786	1,474
.....	64	46	76	45	46	60	46	70	73	48	60	37	1,679	3,923

Turkish.....	7	21	7	7	28	21	20	11	21	7	5	9	104	963
Welsh.....	50	74	96	76	63	99	96	71	66	115	112	91	1,009	1,903
West Indian (except Cuban).....	29	30	55	60	64	115	84	78	91	82	64	39	791	1,987
Other peoples.....	81	56	175	280	264	230	198	212	185	295	47	21	2,044	2,044
Total, 1915.....	15,481	13,873	19,263	24,532	26,069	22,598	21,504	21,949	24,513	26,450	24,545	18,901	258,678	688,495
Total, 1914.....	44,708	46,873	92,021	119,885	107,796	71,728	60,377	87,706	29,143	80,416	26,298	20,944	.....	688,496
Total, 1913 ¹	46,441	59,156	96,958	136,371	137,262	176,261	138,244	126,180	136,247	134,140	104,671	95,387	.....	.....

¹ For year ending Dec. 31, 1913, 1,387,313.

8 MONTHLY REVIEW OF THE BUREAU OF LABOR STATISTICS.

IMMIGRANT ALIENS ADMITTED, BY OCCUPATIONS, AND BY MONTHS, JANUARY TO DECEMBER, 1915.

Occupation.	Janu-ary.	Feb-ru-ary.	March.	April.	May.	June.	July.	Au-gust.	Sep-tem-ber.	Octo-ber.	No-vem-ber.	De-cem-ber.
Professional:												
Actors.....	50	33	63	37	43	39	59	140	79	72	49	38
Architects.....	19	17	13	15	11	21	20	19	15	17	18	18
Clergy.....	63	59	64	61	62	71	55	81	127	113	76	33
Editors.....	11	11	8	6	7	8	12	13	17	28	12	14
Electricians.....	34	29	55	29	58	53	43	46	53	39	65	44
Engineers.....	100	94	114	128	138	138	155	123	181	133	184	191
Lawyers.....	15	11	24	19	17	22	37	31	33	17	25	13
Literary and scientific persons.....	17	17	12	16	20	16	23	28	41	18	24	14
Musicians.....	38	33	49	30	60	58	48	45	63	101	112	42
Officials (government)	45	51	28	34	25	32	48	21	33	22	29	25
Physicians.....	37	21	37	22	30	45	46	36	33	39	16	20
Sculptors and artists..	29	19	32	16	30	22	19	29	31	39	45	26
Teachers.....	108	93	99	116	115	154	164	173	236	160	125	95
Other.....	198	176	165	160	153	162	138	167	217	223	156	118
Total.....	764	664	763	689	769	841	867	952	1,159	1,019	936	691
Skilled:												
Bakers.....	59	48	76	77	75	75	85	61	53	62	49	51
Barbers and hairdress-ers.....	67	67	58	84	98	72	78	70	80	87	70	67
Blacksmiths.....	49	58	73	97	100	72	71	69	85	80	49	64
Bookbinders.....	.....	6	6	8	1	4	5	6	6	8	7	7
Brewers.....	2	.....	.....	3	4	2	1	2	.....	1	.....	3
Butchers.....	51	38	30	38	50	63	38	50	49	47	56	44
Cabinetmakers.....	14	16	13	14	21	12	24	31	22	14	26	19
Carpenters and joiners.	232	231	367	436	488	474	385	407	354	294	318	307
Cigarette makers.....	1	1	4	4	1	3	4	3	1	1	3	2
Cigar makers.....	45	18	22	27	28	26	39	69	55	184	163	34
Cigar packers.....	1	2	.....	2	1	2	3	3	.....	2	7	.....
Clerks and account-ants.....	460	444	488	570	595	674	592	720	788	781	728	521
Dressmakers.....	101	91	102	158	134	127	111	115	164	151	157	88
Engineers (locomotive, marine, and station-ary).....	53	54	62	69	61	66	68	75	48	67	80	68
Furriers and fur work-ers.....	9	9	5	7	14	10	15	12	14	30	22	11
Gardeners.....	26	39	54	55	37	24	24	22	37	30	36	24
Hat and cap makers...	13	5	10	12	12	5	26	9	11	10	13	10
Iron and steel workers.	27	43	54	50	72	70	65	76	57	63	65	39
Jewelers.....	6	13	14	18	14	18	19	13	18	15	17	8
Locksmiths.....	2	.....	4	.....	9	1	4	4	8	.....	8	4
Machinists.....	79	89	81	108	105	90	87	116	136	121	166	145
Mariners.....	206	161	195	286	284	303	163	197	172	174	190	181
Masons.....	72	57	99	150	152	162	142	127	114	86	109	68
Mechanics (not speci-fied).....	33	37	39	64	49	82	47	65	36	54	33	41
Metal workers (other than iron, steel, and tin).....	20	15	13	16	23	17	31	41	14	17	24	20
Millers.....	5	4	8	12	8	6	11	7	9	3	10	11
Milliners.....	26	28	24	16	18	30	30	29	43	30	26	24
Miners.....	140	149	170	190	185	225	165	216	204	265	205	163
Painters and glaziers..	51	55	91	93	78	129	104	82	106	77	93	67
Pattern makers.....	2	1	2	1	3	3	2	3	3	4	1	4
Photographers.....	12	11	14	17	11	9	15	14	19	17	15	14
Plasterers.....	18	17	16	20	29	34	30	37	17	17	23	9
Plumbers.....	14	16	22	26	43	29	28	36	31	25	21	34
Printers.....	26	28	35	27	40	19	40	33	41	38	50	36
Saddle and harness makers.....	2	3	9	2	6	7	12	18	7	9	11	7
Seamstresses.....	69	69	85	103	92	149	140	120	134	123	129	80
Shoemakers.....	68	55	112	130	150	82	113	105	101	71	99	51
Stokers.....	151	42	66	72	97	63	41	44	78	44	58	41
Stonecutters.....	19	26	31	46	39	34	27	27	22	15	15	39
Tailors.....	171	142	183	188	202	172	272	286	236	199	330	185
Tanners and curriers..	2	3	5	5	4	4	10	7	12	6	5	3
Textile workers (not specified).....	17	11	19	16	11	21	18	20	19	25	22	15
Tinners.....	5	8	8	14	19	13	24	17	9	13	10	16
Tobacco workers.....	2	.....	2	2	4	2	3	5	3	6	6	2
Upholsterers.....	6	3	10	4	7	6	5	5	4	6	6	9
Watch and clock makers.....	5	10	14	5	15	8	8	13	12	7	11	7
Weavers and spinners..	30	48	45	62	52	58	44	40	51	76	74	41

IMMIGRANT ALIENS ADMITTED, BY OCCUPATIONS, AND BY MONTHS, JANUARY TO DECEMBER, 1915—Concluded.

Occupation.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
Skilled—Concluded.												
Wheelwrights.....		2	2	3	6		2	2	1	1	2	2
Woodworkers (not specified).....	9	10	8	18	16	11	28	15	17	13	15	10
Other skilled.....	106	137	167	170	206	150	181	206	162	168	206	163
Total.....	2,584	2,420	3,017	3,595	3,769	3,718	3,480	3,750	3,663	3,637	3,839	2,859
Miscellaneous:												
Agents.....	76	76	89	57	90	90	88	62	102	127	133	113
Bankers.....	17	19	10	22	21	20	20	25	11	33	31	20
Draymen, hackmen, and teamsters.....	28	29	38	36	64	39	42	45	35	25	30	23
Farm laborers.....	829	897	1,418	2,533	1,958	1,419	1,137	910	1,023	1,772	1,866	1,221
Farmers.....	379	400	485	551	475	558	383	438	408	445	667	773
Fishermen.....	16	24	112	172	90	46	24	49	39	41	56	55
Hotel keepers.....	24	24	30	25	33	29	24	26	22	15	24	20
Laborers.....	2,148	1,544	3,144	3,860	5,399	4,203	4,315	4,310	4,343	4,564	3,849	3,124
Manufacturers.....	27	31	18	17	20	17	26	11	30	33	29	20
Merchants and dealers.....	548	484	582	551	688	726	707	665	609	689	646	496
Servants.....	1,373	1,319	1,823	2,658	3,207	2,256	1,989	2,027	2,700	3,174	2,561	1,476
Other miscellaneous....	772	655	680	808	747	848	740	1,102	930	964	886	722
Total.....	6,237	5,502	8,429	11,290	12,792	10,251	9,495	9,670	10,252	11,882	10,778	8,063
No occupations (including women and children)....	5,896	5,287	7,054	8,968	8,739	7,788	7,662	7,577	9,439	8,912	8,992	7,288
Total.....	15,481	13,873	19,263	24,532	26,069	22,598	21,504	21,949	24,513	25,450	24,545	18,901

TRAINING OF IMMIGRANTS FOR CITIZENSHIP.

Recent reports furnished by the Bureau of Naturalization show a very rapid development of its work for the better education of candidates for citizenship, in the principles of American life and government. The need for such work is evident. Each year approximately 100,000 certificates of citizenship are issued. Many of the candidates have only a minimum understanding of the rights and duties attaching to their new status, and, in any case, the great majority would vastly benefit by a more thorough training in these matters.

To some extent the need for such training had been met through the establishment of citizenship classes by public schools, associations, and individuals. These activities, however, covered only a small portion of the field, and, in addition, it developed that a number of them were not in good faith, being simply means for the exploitation of the immigrant.

About a year ago the Bureau of Naturalization, after consultation with various school authorities, worked out a comprehensive plan for the education of candidates for citizenship. Under this plan the bureau arranges to send to the public-school authorities of his community a statement showing the name, address, and nationality of each resident alien who has declared his intention to become a citizen or of each petitioner to be naturalized. At the same time it advises the declarant or petitioner of its action and of the public-school advan-

tages. It then rests with the school authorities to encourage the prospective citizens to enroll in the schools and, if necessary, to establish special courses for their accommodation.

During the fiscal year 1915 the Bureau of Naturalization received approximately 350,000 applications for citizenship. This number includes both declarations of intention and petitions for naturalization, a declarant having to wait two years before petitioning for naturalization. It is estimated that not less than 150,000 of the above applicants had wives, thus making a total of a half million adult alien residents coming within the province of the bureau as prospective citizens of this country.

Out of this number the bureau sent the names of approximately 122,000 to the public schools of the communities where the various applicants resided. The accompanying statement shows the distribution of this number among the States.

The public schools have shown an earnest spirit of cooperation. With the opening of the present scholastic year 50 cities and towns were cooperating. At the end of December this number had grown to 450 and by the end of January, 1916, to 566 cities and towns, representing 44 States. Hundreds of other localities have expressed their interest but have been deterred from cooperation by local conditions which render such work impracticable.

For the use of schools in the conduct of citizenship classes the bureau has published a tentative outline course in citizenship, based largely upon the experience of various schools where this kind of work has been carried on. The outline indicates briefly the more desirable subjects of study for citizenship courses. It emphasizes the teaching of the English language, American history, and the essential principles of American government, but aims also at an elementary general education for those who are in need thereof.

In addition to the class training indicated, the outline also suggests a laboratory method of teaching civics. This method calls for lectures by city officials upon the functions of their respective offices and for the organization of the students into mock governments, with nominations, elections, officers' meetings, etc., for the practical demonstration of governmental organization and purposes. It is also urged that graduates of the schools form alumni classes for continued association and discussion.

The primary purpose of the plan outlined above is to reach those resident aliens who are contemplating becoming citizens. In addition, however, the effort is also being made to reach all foreign-born residents, many of whom have no immediate intention of becoming citizens, but who are living in this country in various degrees of ignorance as to its institutions and political organizations. Also, it has

been found that there is a demand and need for such training even on the part of many native-born persons.

The bureau has planned to hold a convention next July in Washington, D. C., for the discussion of the various questions in regard to citizenship schools and for exhibiting the result of the work of various schools of this character. It is also the desire to develop out of the conference a more complete course of instruction based upon the experience of the several schools.

The table following shows the number of papers filed during the fiscal year 1915 and the number of names sent to school authorities:

NUMBER OF PAPERS FILED DURING FISCAL YEAR 1915, AND NUMBER OF NAMES SENT TO SCHOOL AUTHORITIES.

State.	Foreign-born white population (1910) in—		Papers filed during fiscal year 1915, in—				Number of names sent to school authorities.
			State.		Cities cooperating.		
	State.	Cities cooperating.	Declarations.	Peti-tions.	Declara-tions.	Peti-tions.	
Alabama.....	18,956	5,700	242	103	145	62	18
Arizona.....	46,824	3,474	1,526	476	491	191	19
Arkansas.....	16,909	.....	150	78	.....	.....	.....
California.....	517,250	274,457	9,202	4,803	7,400	3,848	4,598
Colorado.....	126,851	47,272	1,825	988	679	328	271
Connecticut.....	328,759	239,203	3,874	1,724	3,874	1,724	1,840
Delaware.....	17,420	13,678	238	94	225	103	124
District of Columbia.....	24,351	24,351	385	225	385	225	299
Florida.....	33,842	12,640	413	197	191	85	95
Georgia.....	15,072	4,410	262	194	91	75	46
Idaho.....	40,427	2,283	956	498	94	21	4
Illinois.....	1,202,560	890,894	24,638	10,732	21,984	9,776	13,994
Indiana.....	159,322	76,317	4,194	936	2,935	589	310
Iowa.....	273,484	52,515	2,780	1,190	882	412	486
Kansas.....	135,190	15,634	1,407	640	417	123	127
Kentucky.....	40,053	17,436	233	155	119	65	88
Louisiana.....	51,782	28,534	462	345	416	294	382
Maine.....	110,133	44,321	892	512	771	400	353
Maryland.....	104,174	77,043	1,171	572	1,049	506	715
Massachusetts.....	1,051,050	920,922	14,697	6,165	14,654	6,155	8,665
Michigan.....	596,524	268,933	10,548	3,140	8,583	2,205	5,929
Minnesota.....	543,010	208,385	7,232	3,404	3,917	2,356	3,099
Mississippi.....	9,389	269	133	82	115	18	60
Missouri.....	228,896	153,561	3,222	1,034	2,864	867	1,077
Montana.....	91,644	2,099	3,334	2,418	74	55	.....
Nebraska.....	175,865	34,268	2,346	877	1,333	276	397
Nevada.....	17,999	.....	417	155	.....	.....	.....
New Hampshire.....	96,558	55,700	1,004	350	891	292	267
New Jersey.....	658,188	456,821	10,958	4,805	8,290	3,635	5,279
New Mexico.....	22,654	.....	214	103	.....	.....	.....
New York.....	2,729,272	2,392,579	80,950	24,880	79,616	24,364	47,328
North Carolina.....	5,942	146	78	53	2	1	3
North Dakota.....	156,158	8,143	2,177	1,394	452	143	95
Ohio.....	597,245	382,375	10,054	4,272	8,903	4,847	5,516
Oklahoma.....	40,084	1,406	346	221	68	46	2
Oregon.....	103,001	47,868	2,191	1,066	1,281	584	627
Pennsylvania.....	1,438,719	732,888	21,952	16,633	19,897	15,655	13,571
Rhode Island.....	178,025	132,464	1,887	816	1,887	816	830
South Carolina.....	6,054	2,850	85	64	72	48	35
South Dakota.....	100,628	4,191	1,532	863	256	87	56
Tennessee.....	18,459	2,993	177	80	30	17	25
Texas.....	239,984	37,549	2,885	716	1,010	287	561
Utah.....	63,393	20,338	878	500	457	260	392
Vermont.....	49,861	5,664	545	308	7	.....	29
Virginia.....	26,628	8,419	841	246	730	181	219
Washington.....	241,197	118,429	4,827	2,289	3,506	1,613	1,437
West Virginia.....	57,072	7,964	820	360	290	146	68
Wisconsin.....	512,569	206,226	5,513	3,963	3,723	2,421	2,414
Wyoming.....	27,118	.....	580	346	.....	.....	.....
Total.....	13,345,545	8,043,612	247,273	106,063	204,956	86,192	121,750

¹ Estimated.

² Enrolled.

EMPLOYMENT IN SELECTED INDUSTRIES IN JANUARY, 1916.

In continuation of plans outlined in preceding issues of the MONTHLY REVIEW, there are presented in this number data showing the fluctuations in the volume of employment as between January, 1916, and December, 1915, and between January, 1916, and January, 1915, in representative identical establishments in several of the principal manufacturing industries of the United States.

In the first table presented below, a comparison is made between the number of employees and total pay rolls in December, 1915, and January, 1916.

COMPARISON OF EMPLOYMENT IN IDENTICAL ESTABLISHMENTS IN DECEMBER, 1915, AND JANUARY, 1916.

Industry.	Estab- lish- ments to which in- quiries were sent.	Estab- lish- ments report- ing for Decem- ber and Janu- ary.	Period of pay roll.	Employees.			Earnings.		
				Number on pay roll in—		Per cent of increase (+) or de- crease (-).	Amount of pay roll in—		Per cent of increase (+) or de- crease (-).
				Decem- ber, 1915.	Janu- ary, 1916.		Decem- ber, 1915.	Janu- ary, 1916.	
Boots and shoes.....	85	63	1 week..	50,016	51,606	+3.2	\$641,191	\$654,732	+2.1
Cotton manufacturing.....	92	56	...do....	43,702	42,370	-3.0	354,032	360,116	+1.7
Cotton finishing.....	19	16	...do....	12,051	11,937	-.9	135,300	132,315	-2.2
Hosiery and underwear.....	82	46	...do....	24,321	24,573	+1.0	227,935	224,935	-1.3
Iron and steel.....	139	93	½ month.	142,509	144,704	+1.5	4,843,420	4,560,916	-5.8
Silk.....	61	31	2 weeks.	14,789	15,211	+2.9	314,693	305,164	-3.0
Woolen.....	47	14	1 week..	9,398	9,769	+3.9	97,589	103,883	+6.4

Returns for January compared with December show an increase in the number of employees in five of the seven industries covered, the greatest increase being 3.9 per cent in the manufacture of woolen goods. Two industries show a decrease, the decrease in cotton manufacturing being 3 per cent. In earnings, however, four of the seven industries showed a decrease in January as compared with December.

In the table following, a comparison is made between figures for January, 1916, and January, 1915:

COMPARISON OF EMPLOYMENT IN IDENTICAL ESTABLISHMENTS IN JANUARY, 1915,
AND JANUARY, 1916.

Industry.	Estab- lish- ments to which in- quiries were sent.	Estab- lish- ments report- ing for Janu- ary both years.	Period of pay roll.	Employees.			Earnings.		
				Number on pay roll in—		Per cent of in- crease (+) or de- crease (-).	Amount of pay roll in—		Per cent of in- crease (+) or de- crease (-).
				Jan- uary, 1915.	Jan- uary, 1916.		January, 1915.	January, 1916.	
Boots and shoes.....	85	69	1 week..	56,929	65,097	+14.3	690,080	859,181	+24.5
Cotton manufacturing.	92	63	...do....	59,694	58,847	-1.4	496,349	504,515	+1.6
Cotton finishing.....	19	18	...do.....	12,597	14,853	+17.9	132,768	164,249	+23.7
Hosiery and under- wear.....	82	56	...do.....	27,467	31,526	+14.8	217,736	286,756	+31.7
Iron and steel.....	139	86	1 month.	100,792	135,831	+34.8	2,625,977	4,257,314	+62.1
Silk.....	61	42	2 weeks.	17,033	18,642	+9.4	306,260	367,560	+20.0
Woolen.....	47	21	1 week..	17,057	19,462	+14.1	165,421	204,400	+23.0

Each industry, except cotton manufacturing, shows an increase in the number of employees in January, 1916, as compared with January, 1915, the greatest increase being in the manufacture of iron and steel, where the increase was 34.8 per cent. In earnings, all industries covered showed an increase ranging from 1.6 per cent for cotton manufacturing to 62.1 per cent for iron and steel. As a whole the increase in earnings between January, 1916, and January, 1915, was not quite as great as between December, 1915, and December, 1914, as shown in the February REVIEW.

In addition to the data presented in the above tables for number of employees on the pay roll, 83 plants in the iron and steel industry returned 118,549 employees as actually working on the last full day of the pay period reported for in January, 1916, as against 85,730 for the reported pay-roll period in January, 1915, an increase of 38.3 per cent. Figures given by 91 establishments in the iron and steel industry for December, 1915, and January, 1916, show that 130,345 employees were actually working on the last full day of the pay period reported for in December, 1915, as against 127,323 for the reported period in January, 1916, a decrease of 2.3 per cent.

Returns from manufacturers for February have been much more satisfactory than for January. In December, 56 per cent of the establishments responded to the request for information, while in January 68 per cent of the establishments addressed furnished the desired information. This increase in cooperation is appreciated by the Bureau. It is the purpose of the Bureau to make this monthly compilation of service to the manufacturers of the country and it is hoped that there will be even a better response to inquiries sent out for February figures.

EMPLOYMENT IN THE STATE OF NEW YORK IN JANUARY, 1916.

An arrangement has just been completed between the United States Bureau of Labor Statistics and the Bureau of Statistics and Information of the New York Industrial Commission whereby certain manufacturers in the State of New York, who were being asked to supply the same information concerning the amount of employment to both offices in separate reports, will be relieved of such duplicate reporting. Under this arrangement, reports will be made only to the New York bureau, which will then furnish copies to the Federal bureau.

Forty-nine of the larger manufacturing firms of the State will be affected by this action. The principle involved is, however, more important than the number of firms affected in this particular case. It represents a move in the direction of coordination of Federal and State activity when applied in the same field and on the same subject, and the necessity of such coordination, for the sake both of economy and efficiency in Government work and of avoiding unnecessary burdens upon industry, is daily becoming clearer. It may be added that appreciative recognition of the desirability of the plan from the employers' point of view has been voiced by several of the firms affected in replies to a general letter from the New York bureau asking authorization to furnish copies of reports to the Federal bureau.

According to the New York bureau:

The remarkable gain in activity among the manufacturing industries of the State, which was the result of improvement all summer and fall and into December, was held from December to January, the volume of business in January standing practically the same as December. January pay rolls, however, carried 18 per cent more employees and 28 per cent more wages than the pay rolls of one year ago, and this comparison with last year is slightly more favorable than a similar comparison between December of 1915 and December of 1914.

The January pay rolls in the metal working and machinery group were about 2½ per cent larger than those of December; total wages paid in January were 52 per cent greater than a year ago. Within the metal working and machinery group the most striking improvement between December and January was recorded by concerns fabricating structural and architectural iron work; the greatest loss was recorded in the gold, silver, and precious stones industry. In comparison with January of 1915, the most marked improvement was shown by rolling mills, by manufacturers of automobiles and automobile parts, by concerns manufacturing cutlery, tools, and firearms, by shipbuilding concerns and by general machinery manufacturers.

The chemicals, oils, and paints group likewise improved from December to January, the January pay roll carrying 3 per cent more wages and 1 per cent more employees than the December pay roll. Marked increase in activity between December and January was recorded by the paper-making industry, in which the January pay rolls were about 2½ per cent larger than in December. In January this industry was doing

a considerably larger volume of business than last year. Printing and paper making, on the other hand, lost some ground between December and January, but the volume of business is greater than one year ago. The loss was greatest among paper box and tube manufacturers. The textile group employed a larger force and paid more in wages in January than in December. Despite this fact, however, a comparison with conditions a year ago was no more favorable in January than in December. The clothing and millinery group showed marked increase in volume of business between December and January. Inasmuch as this improvement was quite largely seasonal, the industry as a whole compared somewhat less favorably with last year than it did in December or November. The improvement was mostly among concerns manufacturing women's clothing and millinery. The women's clothing industry in January paid 18 per cent more in wages and employed 9 per cent more hands than last year.

The wood manufactures group was slightly less active in January than in December, but in comparison with a year ago this industry group is paying 23 per cent more in wages and employing 13 per cent more men, a far more favorable comparison than was shown in December. The furs, leather, and rubber goods group was slightly less active in January than in December, but the volume of business is a third greater than last year. The food, liquors, and tobacco group was decidedly less active in January than in December, the loss being well distributed among all industries within this group. The greatest decrease, recorded by the confectionery industry, was seasonal. This industry, however, is more active than one year ago. The cigar and tobacco industry, although somewhat less active in January than in December, and although employing a smaller force than one year ago, paid in January 18 per cent more wages than in January, 1915, indicating a resumption of full-time schedules. The stone, clay, and glass group lost markedly between December and January, this loss being shared by all the industries within the group. Despite these losses, however, the group as a whole is doing 14 per cent more business than a year ago. The increase in volume of business over January of 1915 was greatest in the brick and pottery industry.

WORK OF STATE AND MUNICIPAL EMPLOYMENT BUREAUS.

In the January, 1916, issue of the REVIEW the Bureau began the publication of reports of the operation of State and municipal employment bureaus in the different States. Publication of information of this character was continued in the February number, and returns from State employment bureaus in 11 States and municipal employment bureaus in 7 States were presented. In this issue of the REVIEW will be found data from State employment bureaus in 12 States and municipal employment bureaus in 8 States. Reports are given for December, 1914, and December, 1915, from bureaus not included in the preceding publication which have reported those data since the publication of the February issue of the REVIEW, and for January, 1916, for all bureaus rendering reports for that month. Figures for January, 1915, from such bureaus as have furnished that information are also presented for comparative purposes.

16 MONTHLY REVIEW OF THE BUREAU OF LABOR STATISTICS.

OPERATIONS OF FREE PUBLIC EMPLOYMENT OFFICES, DECEMBER, 1914 AND 1915, AND JANUARY, 1915 AND 1916.

State and city.	Number of appli- cations from em- ployers.	Number of persons asked for by em- ployers.	Number applying for work.		Number referred to posi- tions.	Number of posi- tions filled.
			New reg- istra- tions.	Renew- als.		
<i>California (State).</i>						
Los Angeles: January, 1916.....	(1)	3,261	(1)	(1)	3,315	2,856
<i>Colorado (State).</i>						
Colorado Springs:						
January, 1915.....	(1)	231	(1)	(1)	(1)	233
January, 1916.....	(1)	456	(1)	(1)	(1)	390
Denver, No. 1:						
January, 1915.....	(1)	199	(1)	(1)	(1)	174
January, 1916.....	(1)	138	(1)	(1)	(1)	100
Denver, No. 2:						
January, 1915.....	(1)	491	(1)	(1)	(1)	474
January, 1916.....	(1)	120	(1)	(1)	(1)	103
Pueblo:						
January, 1915.....	(1)	245	(1)	(1)	(1)	245
January, 1916.....	(1)	117	(1)	(1)	(1)	112
<i>Illinois (municipal).</i>						
Chicago: January, 1916.....	20	97	(1)	(1)	97	67
<i>Illinois (State).</i>						
Chicago:						
December, 1914.....	(1)	898	2,305	(1)	(1)	648
December, 1915.....	(1)	3,648	4,471	(1)	(1)	3,353
<i>Indiana (State).</i>						
Evansville:						
December, 1914.....	(1)	146	(1)	(1)	155	141
December, 1915.....	(1)	173	(1)	(1)	185	173
January, 1915.....	(1)	80	(1)	(1)	85	80
January, 1916.....	(1)	135	(1)	(1)	135	117
Fort Wayne:						
December, 1914.....	(1)	179	(1)	(1)	175	169
December, 1915.....	(1)	201	(1)	(1)	195	193
January, 1915.....	(1)	121	(1)	(1)	112	196
January, 1916.....	(1)	113	(1)	(1)	113	112
Indianapolis:						
December, 1914.....	(1)	103	(1)	(1)	115	95
December, 1915.....	(1)	274	(1)	(1)	270	240
January, 1915.....	(1)	87	(1)	(1)	91	74
January, 1916.....	(1)	175	(1)	(1)	184	158
South Bend:						
December, 1914.....	(1)	132	(1)	(1)	145	120
December, 1915.....	(1)	246	(1)	(1)	240	225
January, 1915.....	(1)	120	(1)	(1)	118	106
January, 1916.....	(1)	310	(1)	(1)	300	269
Terre Haute:						
December, 1914.....	(1)	324	(1)	(1)	335	318
December, 1915.....	(1)	388	(1)	(1)	368	338
January, 1915.....	(1)	183	(1)	(1)	178	166
<i>Kansas (State).</i>						
Topeka:						
January, 1915.....	15	15	60	5	20	13
January, 1916.....	8	8	48	.....	12	8
<i>Kentucky (municipal).</i>						
Louisville: January, 1916.....	(1)	164	460	825	149	109
<i>Massachusetts (State).</i>						
Boston:						
January, 1915.....	701	809	² 429	(1)	³ 1,332	683
January, 1916.....	1,560	1,832	² 1,089	(1)	³ 3,128	1,430

¹ Not reported.

² Number who were registered.

³ Number of offers of positions.

OPERATIONS OF FREE PUBLIC EMPLOYMENT OFFICES, DECEMBER, 1914 AND 1915,
AND JANUARY, 1915 AND 1916—Continued.

State and city.	Number of appli- cations from em- ployers.	Number of persons asked for by em- ployers.	Number applying for work.		Number referred to posi- tions.	Number of posi- tions filled.
			New reg- istra- tions.	Renew- als.		
<i>Massachusetts (State)—Concluded.</i>						
Fall River:						
January, 1915.....	78	78	1 11	(²)	* 78	67
January, 1916.....	135	143	1 27	(²)	* 134	111
Springfield:						
January, 1915.....	251	277	1 116	(²)	* 353	209
January, 1916.....	592	821	1 335	.....	* 1,099	683
Worcester:						
January, 1915.....	226	304	1 543	(²)	* 516	233
January, 1916.....	793	1,041	1 686	(²)	* 1,386	692
<i>Michigan (State).</i>						
Jackson: January, 1916.....	406	500	128	9	461	461
Saginaw:						
January, 1915.....	1,076	1,076	(²)	(²)	(²)	535
January, 1916.....	572	572	(²)	(²)	(²)	572
<i>Montana (municipal).</i>						
Butte:						
December, 1914.....	158	158	(²)	(²)	146	146
December, 1915.....	405	405	(²)	(²)	330	330
<i>New York (municipal).</i>						
New York City:						
December, 1915.....	748	903	(²)	(²)	1,577	757
January, 1915.....	367	527	6,012	(²)	1,030	404
January, 1916.....	1,510	1,592	1,999	(²)	2,234	* 1,283
<i>New York (State).</i>						
Albany: January, 1916.....	294	422	612	280	614	304
Buffalo: January, 1916.....	568	778	754	333	829	531
New York City (Brooklyn): January, 1916.....	886	1,489	1,530	564	1,683	828
Rochester: January, 1916.....	622	954	692	282	930	541
Syracuse: January, 1916.....	467	594	569	155	585	478
<i>Ohio (State-city).</i>						
Akron: January, 1916.....	(²)	1,481	949	1,767	1,276	938
Cincinnati:						
January, 1915.....	(²)	3,347	3,739	9,532	3,315	3,101
January, 1916.....	(²)	1,289	1,797	4,500	1,262	887
Cleveland:						
January, 1915.....	(²)	4,549	8,587	12,064	4,536	3,922
January, 1916.....	(²)	5,493	2,026	7,828	4,202	3,339
Columbus:						
January, 1915.....	(²)	738	1,249	3,854	680	614
January, 1916.....	(²)	1,457	743	2,629	1,371	1,147
Dayton:						
January, 1915.....	(²)	460	501	1,887	405	329
January, 1916.....	(²)	992	825	1,422	779	730
Toledo:						
January, 1915.....	(²)	374	832	748	359	336
January, 1916.....	(²)	1,786	1,252	2,350	1,602	1,199
Youngstown: January, 1916.....	(²)	1,073	663	1,041	984	756
<i>Oklahoma (State).</i>						
Enid:						
January, 1915.....	42	(²)	(²)	(²)	(²)	39
January, 1916.....	61	(²)	(²)	(²)	(²)	58
Muskogee:						
January, 1915.....	83	(²)	(²)	(²)	(²)	91
January, 1916.....	229	(²)	(²)	(²)	(²)	212
Oklahoma City:						
January, 1915.....	62	(²)	(²)	(²)	(²)	38
January, 1916.....	203	(²)	(²)	(²)	(²)	158
Tulsa: January, 1916.....	313	(²)	(²)	(²)	(²)	261

¹ Number who were registered.
² Not reported.

³ Number of offers of positions.
⁴ Includes day labor.

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OPERATIONS OF FREE PUBLIC EMPLOYMENT OFFICES, DECEMBER, 1914 AND 1915, AND JANUARY, 1915 AND 1916—Concluded.

State and city.	Number of appli- cations from em- ployers.	Number of persons asked for by em- ployers.	Number applying for work.		Number referred to posi- tions.	Number of posi- tions filled.
			New reg- istra- tions.	Renew- als.		
<i>Pennsylvania (State).</i>						
Harrisburg: January, 1916.....	43	372	188	21	137	64
Johnstown: January, 1916.....	30	40	102	2	68	33
Philadelphia: January, 1916.....	110	481	1,277	190	466	267
<i>Rhode Island (State).</i>						
Providence:						
January, 1915.....	313	498	1,704	184	478	478
January, 1916.....	209	274	163	116	211	211
<i>Texas (municipal).</i>						
Dallas:						
January, 1915.....	60	92	261	99	108	92
January, 1916.....	106	167	102	11	160	145
Fort Worth:						
January, 1915.....	102	151	(1)	(1)	160	145
January, 1916.....	106	158	(1)	(1)	160	155
<i>Virginia (municipal).</i>						
Richmond: January, 1916.....	228	364	686	(1)	398	157
<i>Washington (municipal).</i>						
Spokane: January, 1916.....	436	709	349	54	605	689
Tacoma:						
December, 1914.....	494	545	(1)	(1)	548	545
December, 1915.....	256	330	(1)	(1)	334	330
<i>Wisconsin (State).</i>						
La Crosse:						
December, 1914.....	144	314	(1)	(1)	266	164
December, 1915.....	112	158	(1)	(1)	149	76
January, 1915.....	56	125	(1)	(1)	118	49
January, 1916.....	115	179	(1)	(1)	172	94
Milwaukee:						
December, 1914.....	756	1,230	(1)	(1)	1,329	989
December, 1915.....	1,158	2,006	(1)	(1)	1,986	1,712
January, 1915.....	652	1,268	(1)	(1)	1,071	992
January, 1916.....	1,231	2,807	(1)	(1)	2,535	1,917
Oshkosh:						
December, 1914.....	94	105	(1)	(1)	101	87
December, 1915.....	92	113	(1)	(1)	108	99
January, 1915.....	80	103	(1)	(1)	120	86
January, 1916.....	115	130	(1)	(1)	108	78
Superior:						
December, 1914.....	195	355	(1)	(1)	375	216
December, 1915.....	241	283	(1)	(1)	346	279
January, 1915.....	180	443	(1)	(1)	522	260
January, 1916.....	262	927	(1)	(1)	782	567

¹ Not reported.

UNEMPLOYMENT AMONG WOMEN IN RETAIL STORES OF BOSTON.

The extent and causes of unemployment among women in department and other retail stores of Boston and its relation to the rates of pay is the subject of Bulletin No. 182, issued by the Bureau of Labor Statistics of the United States Department of Labor. The study was undertaken in cooperation with the Massachusetts Minimum Wage Commission, which published in 1915 a report of the wages of

women in mercantile establishments in Boston and other Massachusetts cities, to serve as a basis in fixing a minimum wage.

Pay-roll data for a year were available for 15 department and other retail stores in Boston. Agents of the Bureau of Labor Statistics visited the homes of 1,763 of the women employed in these stores, and interviewed personally the women themselves or members of their immediate families. Information was secured concerning the kind of work done by these employees, the number of different positions held, the actual earnings for the year, the amount of time lost and the causes to which these losses were due. In addition, facts were secured bearing on the degree to which the employee depended on her own earnings, the degree to which her family depended on her help, and similar questions.

A striking feature brought out by the report is the numerical importance in department stores of the extra, i. e., the woman or girl who is employed only for special occasions. These extras may be employed for a rush season and at Christmas and Easter or for a special sale or for a single day or evening. Some stores regularly engage extras for one day of the week and the same woman may serve as an extra in several stores during the same week. The 15 stores covered by the investigation had on their pay rolls for the year studied 5,985 regular employees and about 5,600 extras; that is, extras formed 48 per cent of the total number employed. Of the 1,763 women studied in this investigation 1,156, or 65.6 per cent, were regular employees, 346, or 19.6 per cent, were employed as extras, but for part of the year had also some employment as regulars, and 261, or 14.8 per cent, had no employment at all during the year except as extras. These extras were mostly school girls who worked on Saturdays, or married women with some time to spare, or single women who did not depend entirely on their earnings.

The 1,156 women and girls employed as regulars only worked almost exclusively in retail stores. Only 92, or 8 per cent, reported some employment in other industries and this employment was trivial in extent. The amount of time lost while in the employ of stores was studied in detail. For the whole group an average of 2.4 weeks was lost either before entering or after leaving industrial pursuits; 2.4 weeks were lost while the worker was without a job; 3.9 weeks while the worker was in the employ of retail stores, and one-tenth of one week while in other employment. This gives 6.4 weeks out of 49.6 weeks of possible employment, lost either because the worker could not find a job or because she was not steadily employed while holding a job. The amount of time lost differs according to the occupation. Saleswomen lost 6.7 weeks; cashiers, messengers, etc.,

6 weeks; office employees, 3.3 weeks; workroom employees, 10.6 weeks; stock girls, 6.6 weeks; others, 5.8 weeks. For the whole group there were 43.2 weeks of employment during the year, but this was scattered throughout a period of 47.2 weeks during which the workers were nominally employed. These facts are shown somewhat more in detail in the table which follows:

AVERAGE WEEKS OF UNEMPLOYMENT REPORTED BY WOMEN AND GIRLS EMPLOYED AS REGULARS ONLY, BY OCCUPATIONS.

[Occupations shown in this table refer to work in stores only; the occupations while employed in other industries are not given. All who lost less than 6 days have been excluded from this table. Lost time for which the firm paid wages has not been included as unemployment.]

Items.	Sales- women.	Cash- iers, exam- iners, etc.	Office em- ploy- ees.	Work- room em- ploy- ees.	Stock girls.	Others.	Total.
Number reporting.....	601	252	167	76	25	35	1,156
Per cent in each occupation.....	52.0	21.8	14.4	6.6	2.2	3.0	100.0
Weeks not in industrial pursuits:							
Before first employment.....	.3	6.3	1.9	.2	4.9	.....	1.9
After leaving industrial pursuits.....	.7	.2	.1	.1	.....	.....	.5
Total.....	1.0	6.5	2.0	.3	4.9	.....	2.4
Weeks of possible employment during year.....	51.0	45.5	50.0	51.7	47.1	52.0	49.6
Weeks in employ of—							
Stores.....	47.2	39.8	48.7	47.6	40.4	45.8	45.6
Other industries.....	1.3	2.6	.9	1.0	4.0	2.8	1.6
Total.....	48.5	42.4	49.6	48.6	44.4	48.6	47.2
Weeks of unemployment during period of possible employment:							
While without a job.....	2.5	3.0	.4	3.1	2.7	3.4	2.4
While in employ of stores.....	4.2	2.8	2.9	7.5	3.9	2.4	3.9
While in employ of other industries.....	(¹)	.2	(¹)	(¹)	(¹)	(¹)	.1
Total.....	6.7	6.0	3.3	10.6	6.6	5.8	6.4
Per cent of unemployment in period of possi- ble employment.....	13.1	13.2	6.6	20.5	14.0	11.2	12.9
Full weeks actually worked (weeks of possible employment less weeks of unemployment)...	44.3	39.5	46.7	41.1	40.5	46.2	43.2

¹ Less than one-tenth of 1 week.

The most important single cause of lost time is sickness, which accounted for 30.2 per cent. Next comes enforced lay-offs, accounting for 16.1 per cent. Closely connected with this last cause is the unpaid vacation, accounting for 13.1 per cent, of which it is very difficult to say whether the employee could have avoided taking it if she had wished. These two together accounted for a trifle more of the lost time than was due to illness. Inability to get work was responsible for 15.8 per cent of the time lost, sickness in the employee's family for 10.6 per cent, home responsibilities for 7.4 per cent, and other causes for 6.8 per cent. Distinctly personal reasons, it appears, accounted for 48.2 per cent of the lost time. If the unpaid vacation be counted as a matter of necessity 45 per cent was

due to economic or business reasons, while 6.8 per cent was due to unclassified causes.

Very little time was lost through changing positions. Of the 1,156 women studied 90.2 per cent worked only in one place during the year under investigation, 8.3 per cent worked in only two retail establishments, and less than 2 per cent were employed in three or more stores.

Earnings were affected by the amount of time lost. For 1,152 women and girls the entire earnings for the year were ascertained. These showed an average of \$316.77 earned in retail stores during the year. Eighty-eight of these employees also worked in other industries, earning therein an average of \$118.75 during the year. The average amount earned both in stores and in other industries is \$325.84, or a weekly average of \$7.54 for the 43.2 full weeks actually worked, and an average of \$6.57 for the 49.6 weeks of possible employment which, in addition to the time actually worked, includes all time lost, both voluntarily and involuntarily, amounting to 6.4 weeks.

For the saleswomen, who equal about half of those reporting earnings, the average amount earned in stores was \$370.27, and for the 31 who also worked in other industries the average amount earned therein was \$151.97. The average yearly earnings both in stores and in other industries was \$378.16, and the weekly average for the 44.3 weeks actually worked was \$8.54. The average for the 51 weeks of possible employment was \$7.41 per week for this occupation.

The workers included among these regulars were for the most part young; 43.7 per cent were under 21 and only 23 per cent were over 30. Only 9.9 per cent were, or had been, married, and only 11.4 per cent were living independently. The remainder lived either with their parents or some other relative. The majority, however, were depending upon themselves for support. Nine and three-tenths per cent had absolutely no one on whom they could call for help in case of need. Eighty-four and four-tenths per cent supported themselves entirely, although in case of an emergency their families could and undoubtedly would have given help; 5.2 per cent depended mainly on themselves and only 13, or 1.1 per cent, were not dependent for necessities on their own earnings. A number of the workers studied were not only wholly dependent but contributed largely to the support of their respective families. In 85 per cent of the cases studied the family would have found it necessary to lower its standard of living if the woman did not contribute, while in practically two-fifths of the cases from one-fourth to the whole of the family income was derived from the woman studied.

IRREGULARITY OF EMPLOYMENT.

The results of three separate inquiries into the problem of unemployment and the regularity of employment have recently appeared and are of interest by reason of the similarity of their conclusions concerning the extent of unemployment and the existence of irregular employment in certain industries. The first report is that made by the American Association for Labor Legislation, in cooperation with the Association on Unemployment, upon conditions during the winter of 1914-15. The second study was made under the direction of the department of public works of Philadelphia, and concerned itself with an investigation of unemployment in the textile industry in Philadelphia, particularly in relation to the problem of industrial management. The third is a study of the regularity of employment in the women's ready-to-wear garment industry by the Bureau of Labor Statistics.

IRREGULARITY OF EMPLOYMENT IN WOMEN'S GARMENT INDUSTRIES.¹

In spite of the great advances made in late years in the women's garment industries in the elimination of excessive overtime, the shortening of the regular hours of labor, and the raising of rates of wages, the problem of irregularity of employment at the present time seems to be quite as acute as ever. Shorter hours, better treatment, and better weekly pay have not been accompanied by a lengthening of the working season. A study of the extent and causes of irregularity of employment and of the attempts to regularize employment is published by the United States Bureau of Labor Statistics of the Department of Labor as its Bulletin No. 183.

The bureau's study is based upon data secured from employers' pay rolls showing the actual amount of wages paid from week to week for a period of 52 consecutive weeks. The study covered four out of the five so-called centers of manufacture of women's ready-to-wear garments, the cities of New York, Chicago, Cleveland, and Boston, the field thus covered embracing approximately 76 per cent of the industry of the country. In these four cities pay-roll data were secured from more than 500 establishments, representing approximately 150,000 workers and 17 groups of manufacturers.

Seasonal fluctuations of employment are shown throughout this report in terms of percentages of the average weekly pay roll. To obtain this the annual total of the pay roll of a single establishment or of an entire group was divided by 52 in order to obtain the pay roll of the average week, which was then taken as the unit of measure-

¹ Regularity of employment in the women's ready-to-wear garment industries. Washington, 1916. 155 pp. (Bulletin of the United States Bureau of Labor Statistics. Whole number 183.)

ment—100 per cent—and specific amounts indicating expenditures for all productive labor for individual pay-roll weeks were then reduced to a percentage of this unit.

IRREGULARITY OF EMPLOYMENT IN WOMEN'S READY-TO-WEAR GARMENT INDUSTRIES OF NEW YORK, AS MEASURED BY THREE DIFFERENT STANDARDS.

Industry.	Variation for year.			Number of weeks in which pay roll varied by at least 20 points from average.			Number of weeks in which a variation of at least 20 points occurred.
	Low point.	High point.	Range.	Below.	Above.	Total.	
Cloaks, suits, and skirts.....	43.2	164.4	121.2	19	19	38	8
Dresses and waists.....	52.6	137.2	84.6	8	9	17	2
Women's muslin underwear.....	70.9	119.8	48.9	3	.....	3	3
Children's and misses' dresses.....	53.7	127.3	73.6	6	7	13	3
House dresses and kimonos.....	45.3	139.9	94.6	7	13	20	5
Custom tailoring.....	12.3	195.5	183.2	23	20	43	10

It is evident that the relative irregularity of a given trade differs considerably according to the particular measure applied. Thus the manufacture of dresses and waists, which stands fourth in range of variation, stands sixth in number of sudden and violent fluctuations. Arranging the six industries, therefore, in the order of their irregularity by each standard, and averaging their numerical positions in each of these three categories, the following grouping is obtained, which probably represents, as nearly as can be ascertained from the data available, their comparative irregularity, beginning with the most irregular: (1) Custom tailoring; (2) cloaks, suits, and skirts; (3) house dresses and kimonos; (4) dresses and waists; (5) children's and misses' dresses; (6) women's muslin underwear.

Unemployment, on account of its chronic recurrence, has particularly serious consequences in the women's garment industries. In one of the industries where a special study was made it was found that one-tenth of the employees had work for less than 10 weeks, and less than one-fifth of those actually employed in the course of a year had work for as much as 40 weeks. In the cloak, suit, and skirt industry the report shows pay rolls in the dullest week amounting to less than one-half those of the average week and only a little more than one-quarter those of the busiest week. In the dress and waist industry pay rolls in the dullest week were found to be only a little over one-half those in the average week and only a little over one-third of those in the busiest week. With slight modifications similar fluctuations of employment were found in the other branches of the women's garment industries.

In spite of this extreme irregularity the matter of regularization of employment has so far received but scant attention from manufacturers or their organizations. Many individual employers, when first interviewed, were apparently unaware of the extreme irregularity of their pay rolls and stated that for the most part their business showed very little irregularity in the course of a year and that, generally speaking, employment in the garment trades is as regular as it could possibly be under the existing circumstances.

The matter of regularization of employment in these trades is of vital importance to the manufacturer as well as to the employees. The more regular the business the better the distribution of the overhead expense, an item amounting generally to not less than 10 per cent of the total sales. Seasonality of employment also means that wages in many instances during the height of the season must be high enough to support workers in comparative idleness during slack periods, a decided factor in increasing the cost of production and the price at which the goods must be sold.

There are, in general, two periods of the intense activity in the women's garment trades—one in the fall and one in the spring—due almost entirely to the changes in weather conditions, during which time the making up of heavy fabrics is undertaken for cold weather and of lightweight fabrics for summer wear. Specific degrees of variation in employment can be traced to various causes, changes in weather conditions primarily and, secondly, to changes in styles, the degree of specialization, scale of production, the method of production, and quality of the goods.

That considerable relief from the unemployment prevailing in these trades can be secured by the systematic dovetailing of occupations in some of the allied branches of the trades is evidenced by the experience of a number of manufacturers found in the course of this investigation. Dovetailing, as it was found in these establishments, consisted in utilizing the employees during the dull seasons of the year for the manufacture of garments of a simpler variety than the line ordinarily produced, such that a garment worker of average experience could easily adjust himself at short notice, or garments such that the manufacture in considerable quantities was possible regardless of seasonal demands—that is, in advance of sales.

One of the primary obstacles to dovetailing is the qualifications called for in skilled trades. The manufacturers also are somewhat reluctant to attempt it, firmly believing in specialization as the only method of achieving success in their business and sometimes knowing relatively little about materials, styles, marketing, or method of manufacture in other lines. The workers also are in some cases

opposed to it, hesitating to accept the relatively smaller rates of pay that usually prevail in trades where simpler garments are manufactured.

It was suggested by some employers that dovetailing could probably be materially assisted by industrial training of a general or technical character, which would increase the adaptability of the worker.

SURVEY OF THE AMERICAN ASSOCIATION FOR LABOR LEGISLATION.¹

The American Association for Labor Legislation based its report on information received from over 300 workers against unemployment in 115 different communities in the United States. Its information came from chambers of commerce, members of unemployment committees, police departments, and public officials. An unusual amount of idleness was indicated during the winter of 1914-15. Thirty-six charitable organizations in 29 cities reported that during the six months ended April 1, 1915, in 29,039, or 48 per cent of the family cases, the chief wage earner, though willing and able to work, was unemployed at the time the application for relief was made. "The average number of men looking for jobs," said the chairman of the Boston Overseers of the Poor, "has increased over 100 per cent and the jobs for these men have decreased about 50 per cent. The figures are even greater in some cases." This is paralleled by testimony from public employment exchanges and by returns from trade-unions in New York City, Washington, D. C.; Birmingham, Ala.; Dayton, Ohio; Louisville, Ky.; and St. Louis, Mo., as well as by an unemployment police census of Providence, R. I., and by a canvass of industrial policyholders made by the Metropolitan Life Insurance Co. for the Bureau of Labor Statistics in 15 manufacturing centers of the United States.

The report notes an awakening of public interest in the question of unemployment as having taken place throughout the country. The public interest was, however, handicapped, it is stated, by the failure to differentiate between the unemployable and the unemployed, resulting in an inadequate provision being made for the former class, and a considerable diversion to the unemployable of funds intended to help the unemployed. The unemployed were aided through industrial training in several different ways in a number of communities, a form of aid to be encouraged as tending to make a period of unemployment a time of benefit instead of loss. The unemployment situation in 1914-15 emphasized the necessity of establishing a nation-wide system of public employment exchanges;

¹ Unemployment Survey, 1914-15. New York, 1915. (American Labor Legislation Review, November, 1915, pp. 475-506.)

and it is seen that the increase of cooperation between public employment agencies, between city, State, and Nation in the management of local exchanges, and between citizens and exchanges to increase their usefulness, is a step in that direction. Legislation in the various States, during the winter, showed that the unemployment crisis was reflected in the passage of progressive laws.

The report emphasized particularly the significance of provision for public works in times of unemployment as a relief for the situation. It was noted in that connection that the greatest obstacle in the starting of public works was the failure to make plans for their conduct until the emergency was at hand.

As a result of the survey here reported there is recommended: (1) Organization in different municipalities of equipartisan committees on unemployment for coordinating the work of existing agencies. (2) Education of the citizen as to his civic and industrial responsibility for unemployment. (3) Provision for emergency relief, preferably in the way of odd jobs or regular work. (4) Separation of the unemployable and the unemployed, that different treatment may be given each class. (5) Industrial training classes with scholarships for unemployed workers. (6) Establishment of employment exchanges properly managed, with the ultimate view of developing a national system of employment exchanges. (7) Provision of public work consisting not of unnecessary work but of needed public improvement so adjusted as to allow the concentration in dull years and seasons. Laws restricting cities to contract work should be repealed. (8) Regularization of industries, suggesting the use of regular employees in times of depression in making repairs and improving the plant, and the policy of part-time employment rather than the reduction in numbers. (9) Unemployment insurance, which should be compulsory and supported by contributions from employers, employees, and the State, "as the most just and economical method for the proper maintenance of the necessary labor reserves and as supplying the financial pressure needed to secure the widespread regularization of industry."

THE UNEMPLOYED IN PHILADELPHIA.¹

The existence of unemployment in Philadelphia in good times as well as in bad times may be set down as clearly indicated by the investigation made by the department of public works in Philadelphia during the winter of 1914, under the direction of its special investigator:

¹ Philadelphia unemployment, with special reference to the textile industries: A report by Joseph H. Willits. Department of Public Works. Philadelphia, [1915]. 170 pp.

The textile industry and the clothing industry reveal chronic unemployment at its worst. It is very doubtful whether the lace weavers of Philadelphia have averaged more than three-fifths time in the last five years. One large carpet mill, selected to be as nearly representative as possible, has never failed to lose 20 per cent of its time any year in the last four years. The manufacturers of dress goods frequently do not make over three-fourths of the year's normal working time. The women's cloak and garment factories ordinarily run at 20 per cent of capacity, for four months of each year. One large railway-equipment plant has not averaged over 50 per cent capacity in the last five years. It is estimated that dock hands, on the average, do not work over two days a week. Every winter thousands of Italians return to Philadelphia from the truck farms in South Jersey and render the city's unemployment problem more acute.

The problem of unemployment, according to this report, interests every industrial center, because it menaces its leadership in competition with other rival centers; it is of concern to the workers because it tends to their degeneracy in skill, industry, thrift, standards of living, and public morality; and the industrial welfare of employers is eventually endangered.

The problem is one of industry and can be most effectively handled by the employers themselves, though a partial duty rests upon consumers who can contribute regularity in employment by refusing to follow extreme styles.

The report concludes that unemployment primarily can be reduced very greatly by the employer, and cites in support of its conclusion the practice of the most successful and thoughtful concerns in meeting the problem. The city government, however, has its task to fulfill in properly regulating its public work.

The report is divided into certain well-marked parts—part 1, presenting the facts of unemployment in different branches of the textile industry in Philadelphia and to a less extent in other industries; part 2, the cost of unemployment to the employee and to the employer; part 3, the increase of knowledge about unemployment; part 4, the management of the employing concern in its relation to unemployment; part 5, the duty of the civil Government.

A significant development of the survey was the conviction that the problem of regularizing employment in America must be met by private employers in their own establishments.

The conclusions of the author as to the amount and extent of unemployment in Philadelphia are based upon a survey made during March, 1915, by the Metropolitan Life Insurance Co., which in the course of its investigation canvassed 79,058 families, in which were found 346,787 persons and which represented 137,244 wage earners. The general results of this investigation showed 10.3 per cent of the wage earners as unemployed, and 19.6 per cent as part-time workers.

Regarding the problem of unemployment as primarily a question of industrial organization, the report criticises the failure of employers to keep adequate records of their employed force, hours worked, wages paid, numbers taken on and off the pay roll, etc., with a view to improvement in employment and its regularity and to the keeping of cost records in such a way as not to exaggerate expenses in slack time. It is recognized that the labor turnover of most employers is out of all proportion to the number employed. In compiling the records of one establishment furnished by its foreman, covering 1907 to 1915, it was shown that 75 per cent of the men and 66 per cent of the women employees remained in the employ of the firm less than one year. Yet it was stated by the foreman that most of the employees do not do good work until they have been with the firm eight weeks. The number of hirings per year was about 90 per cent of the number normally on the pay roll for this same establishment.

Another essential to secure regularity of employment is the necessity of coordinating the manufacturing ends of a business so as to make regularity of production possible through regularity of orders.

The report suggests, among numerous other methods, the practice of dovetailing of trades so as to permit of manufacturing simpler stock in slack times, and also notes the suggestion of a printing firm to train its employees in department-store work so as to allow of a shift to that line of work in dull times, and to act in cooperation with the department store.

But the problems of unemployment are not wholly those of the employer, but are partly to be met by the city. In this connection the report urges cooperation by the city with the State department of labor and industry and with the Federal Bureau of Immigration in establishing a public employment bureau. The city should arrange its own public works in such a manner as to minimize unemployment. This can be done by executing public works when other work is slack. As a concrete case, the city should not build its subway in such a way as to terminate the work suddenly and then throw a large labor force upon the market at one time, but should arrange to wind up the work gradually and give it out, furthermore, in even amounts. Relief works, the report concludes, are a mere makeshift in dealing with unemployment.

The labor exchange suggested by the report is one of wide and varying functions, and one which would need to be under efficient direction. It is proposed that it shall (1) endeavor to bring together employers seeking help and employees seeking work; (2) act as the city's headquarters in a steady fight against unemployment; (3) endeavor to establish a clearing house for dock labor; (4) endeavor to bring about regular seasonal transfer of workers between trades

whose seasons dovetail; (5) cooperate with the department of vocational guidance and instruction in the board of education, and act as a vocational guidance bureau for young people; (6) assist in the collection and dissemination of knowledge concerning unemployment; (7) eventually administer an unemployment-insurance system when the plan shall have become practicable.

STRIKES AND LOCKOUTS FROM AUGUST, 1915, THROUGH JANUARY, 1916.

According to data compiled from various sources by the United States Bureau of Labor Statistics, the number of strikes and lockouts during the six months, August, 1915, to January, 1916, inclusive, was 763. The total number occurring during the twelve months of the calendar year, 1915, including a few that began prior to January 1, 1915, but were settled during the year, was 1,404, a number that may be somewhat increased when the records are finally made up.

The following table, which has been corrected for months previous to January, 1916, as reports have come in during the latter month, shows the number of strikes and lockouts begun in each of the months of August, 1915, to January, 1916, inclusive, but excluding 59 strikes and 10 lockouts which started during months not specified. The strikes and lockouts were distributed among the months as follows:

NUMBER OF STRIKES AND LOCKOUTS, AUGUST, 1915, THROUGH JANUARY, 1916, BY MONTHS.

	August.	September.	October.	November.	December.	January.	Total.
Strikes.....	137	155	98	92	62	111	655
Lockouts.....	6	10	8	6	6	3	39
Total.....	143	165	106	98	68	114	694

A brief account of the character of the strikes occurring from August to December, 1915, may be found in preceding numbers of the REVIEW. The data in the tables which follow relate to 145 strikes and lockouts concerning which information was received by the Bureau during the month of January, and include 15 which occurred in previous months but were not before reported, as follows: December, 12; November, 2; October, 1; and 16 others for which the dates of commencement were not reported but most of which probably occurred in the months of December, 1915, or January, 1916. Inasmuch as strikes which start toward the end of a month are frequently not brought to the attention of the Bureau until after the report for the month has been prepared, it is probable that the

corrected figures for the month of January will show a material increase over the number of strikes herein reported for that month.

Most of the disputes reported during January were in the north-eastern section of the country, and all but 15 were in States east of the Mississippi and north of the Potomac and Ohio Rivers. The following table shows the States in which five or more strikes and lockouts occurred:

STATES IN WHICH FIVE OR MORE STRIKES AND LOCKOUTS OCCURRED DURING JANUARY, 1916.

State.	Strikes.	Lockouts.	Total.
New York.....	29	2	31
Pennsylvania.....	28		28
Massachusetts.....	25		25
Ohio.....	12	1	13
Illinois.....	10		10
New Jersey.....	9	1	10
15 other States.....	25	3	28
Total.....	138	7	145

Four of these strikes were confined to women and three included both men and women. No lockouts were reported in which women were concerned.

The industries in which four or more strikes and lockouts were reported were as follows:

NUMBER OF STRIKES AND LOCKOUTS IN SPECIFIED INDUSTRIES, REPORTED DURING JANUARY, 1916.

Industry.	Strikes.	Lockouts.	Total.
Metal trades.....	32	3	35
Clothing industries.....	20	1	21
Building trades.....	16		16
Iron and steel mills.....	12		12
Textile industries.....	9		9
Paper workers.....	6		6
Mining.....	4		4
All others.....	34	2	36
Total.....	133	6	139

Included in the above are 15 strikes of machinists, 16 strikes and 1 lockout of garment workers, 6 strikes of weavers, and 5 strikes of carpenters.

In 54 strikes and 7 lockouts the employees were connected with unions; in 9 strikes they were not connected with unions; and in 3 strikes they were not connected with unions at the time of striking but organized themselves into unions as a result of the strike; in the remaining strikes and lockouts it was not stated whether the strikers had union affiliation or not.

In 117 cases the causes of the strikes and lockouts were given. In 80 per cent of these the question of wages or hours or both was the

paramount issue. The leading causes are shown in the following table:

PRINCIPAL CAUSES OF STRIKES AND LOCKOUTS REPORTED DURING JANUARY, 1916.

Cause.	Strikes.	Lockouts.	Total.
Increase in wages.....	70	2	72
Reduction of hours.....	3	2	5
Wages and hours.....	11	.....	11
Wages, hours, and recognition.....	2	.....	2
Recognition.....	5	1	6
Discharge of employees.....	6	.....	6
Because of wage reduction.....	2	.....	2
Jurisdictional.....	4	.....	4
Other causes.....	8	1	9
Total.....	111	6	117

In 89 of the strikes the number of the persons involved was reported to be 81,665, an average of 918 per strike. In 12 strikes, in each of which the number involved was over 1,000, the strikers numbered 67,350 persons, thus leaving 14,315 involved in the remaining 77 strikes, or an average of 186 to each. In 4 lockouts the number of employees involved was reported as 145, or an average of 36 in each.

The duration of 44 strikes and 1 lockout ending in January was given as 1,457 days, or an average length of 32 days for each disturbance. If, however, the time of four strikes, each amounting to more than 100 days, is deducted from the total, the average length of the remaining 41 strikes is 19 days.

Three strikes were reported lost to the strikers; three others were reported as won in every demand made; in another the strikers returned under the promise of the employer to compromise later; one lockout was lost to the employer; in the remaining 81 strikes reported as settled in January, most of which related to wages or hours, a compromise was reached which enabled both sides to the controversy to claim a victory.

RETAIL PRICES OF FOOD IN THE UNITED STATES.

Reports to the Bureau of Labor Statistics of 17 of the principal articles of food during the year 1915, covering 44 important industrial cities throughout the United States, show a decrease of 1 per cent in the price of all articles combined from 1914 to 1915. Only 3 articles were higher in 1915 than in 1914; flour, which was 20 per cent higher, sugar, 11 per cent higher, and corn meal, 3 per cent higher. It is interesting to note that although flour was higher in 1915 than in 1914 it reached its highest point in May, 1915, and was 18 per cent lower in December than in May.

A comparison of prices in December of each year from 1911 to 1915 shows an upward trend for all articles combined, with an increase of

3 per cent from December, 1914, to December, 1915, although only 4 of the articles advanced in price; flour and hens but slightly, and sugar and potatoes to such a marked degree as to offset the decline in other articles. Yet December of 1914 seems to have been a low point in the price of potatoes, and while the price in December, 1915, shows a decided increase over the price in December, 1914, there was almost no change in December, 1915, as compared with December, 1913.

The table following shows the relative retail prices of each of the 17 articles and of all articles combined in each year, 1907 to 1915, inclusive:

YEARLY AVERAGE RELATIVE RETAIL PRICES OF FOOD, 1907 TO 1915, AS COMPARED WITH AVERAGE PRICES FOR 1915.

(Average price for 1915=100.)

Article.	1907	1908	1909	1910	1911	1912	1913	1914	1915
Sirloin steak.....	71	73	76	79	80	90	99	101	100
Round steak.....	66	69	71	76	76	87	97	103	100
Rib roast.....	75	77	80	83	84	92	99	102	100
Chuck roast.....								105	100
Plate boiling beef.....								103	100
Pork chops.....	77	79	86	95	88	95	104	109	100
Bacon.....	75	77	83	95	92	91	100	102	100
Ham.....	78	80	84	94	92	93	103	105	100
Lard.....	86	86	96	111	95	100	107	106	100
Hens.....	84	85	91	96	93	96	103	105	100
Flour.....	76	81	87	86	81	84	80	83	100
Corn meal.....	81	85	87	88	87	94	92	97	100
Eggs.....	85	87	94	99	95	100	101	104	100
Butter.....	91	92	97	101	94	105	107	101	100
Potatoes.....	119	125	126	114	147	149	113	122	100
Sugar.....	88	90	89	91	98	96	83	90	100
Milk.....	88	90	92	95	96	98	101	101	100
All articles combined.....	81	88	87	91	90	96	98	101	100

In the table following is shown the relative retail prices of each of the 17 articles and of all articles combined, in December of each year, 1911 to 1915:

RELATIVE RETAIL PRICES OF FOOD IN DECEMBER OF EACH YEAR, 1911 TO 1915, AS COMPARED WITH AVERAGE PRICES FOR THE YEAR 1915.

(Average price for 1915=100.)

Article.	Decem- ber, 1911.	Decem- ber, 1912.	Decem- ber, 1913.	Decem- ber, 1914.	Decem- ber, 1915.
Sirloin steak.....	79	91	98	100	98
Round steak.....	75	88	99	100	98
Rib roast.....	83	92	99	100	99
Chuck roast.....				102	98
Plate boiling beef.....				103	101
Pork chops.....	80	89	100	96	91
Bacon.....	87	96	99	103	101
Ham.....	89	96	102	103	103
Lard.....	92	107	107	104	98
Hens.....	88	94	100	96	98
Flour.....	82	80	78	90	91
Corn meal.....	89	92	96	99	99
Eggs.....	133	124	140	140	137
Butter.....	114	116	111	110	108
Potatoes.....	147	101	119	94	120
Sugar.....	104	91	82	92	103
Milk.....	98	101	103	102	100
All articles combined.....	96	97	102	103	106

The relative prices in each month of 1915 of the same 17 articles and of 9 other articles for which prices were secured beginning with January, 1915, are given in the table which follows:

RELATIVE RETAIL PRICES OF FOOD IN THE MONTHS OF 1915 AS COMPARED WITH
AVERAGE PRICES FOR THE YEAR 1915.

(Average price for 1915=100.)

Article.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
Sirloin steak.....	99	97	96	98	100	102	104	103	103	102	100	98
Round steak.....	99	97	96	97	100	102	104	104	103	101	99	98
Rib roast.....	99	98	97	98	100	101	102	102	102	101	100	99
Chuck roast.....	101	99	98	98	100	102	102	102	101	101	99	98
Plate boiling beef.....	102	101	99	100	101	101	101	101	100	100	99	98
Pork chops.....	92	88	88	97	103	102	104	107	111	114	103	91
Bacon.....	101	99	98	98	99	100	101	101	100	102	102	101
Ham.....	101	99	98	97	98	100	101	101	100	101	103	103
Lard.....	104	104	103	102	102	102	99	96	94	97	98	98
Hens.....	98	100	102	103	103	101	99	99	100	99	98	98
Flour.....	99	110	108	109	111	103	99	99	93	90	90	91
Corn meal.....	100	101	101	101	101	100	100	100	99	99	99	99
Eggs.....	131	99	75	77	77	79	82	90	102	118	135	137
Butter.....	108	105	100	101	97	97	96	94	94	98	102	108
Potatoes.....	95	94	93	97	100	111	95	92	89	106	109	120
Sugar.....	91	98	100	101	103	105	106	102	98	93	99	103
Milk.....	101	101	100	100	99	99	99	99	100	100	101	100
Cheese.....	100	101	101	100	101	101	100	98	98	99	100	102
Rice.....	100	100	100	100	100	100	100	100	100	100	100	100
Beans.....	93	98	98	99	98	98	98	97	98	101	109	114
Coffee.....	100	100	100	100	100	100	100	100	100	100	100	100
Tea.....	100	100	100	100	100	100	100	100	100	100	100	100
Canned salmon.....	100	100	100	100	100	100	100	100	100	100	100	100
Onions.....	98	97	95	104	123	116	101	89	86	94	96	101
Prunes.....	101	101	101	101	101	100	100	100	100	99	98	98
Raisins.....	100	100	100	100	100	100	100	100	100	100	100	100
All articles combined.....	101	99	96	97	98	98	99	99	100	103	105	106

SUMMARY OF REPORT ON WOMAN AND CHILD WAGE EARNERS.

The Bureau of Labor Statistics of the United States Department of Labor has just issued as its Bulletin No. 175 a summary of its 19-volume Report on Condition of Woman and Child Wage Earners in the United States. The volumes of the original report, giving the results of the Bureau's investigations, which had been made under the instructions of an act of Congress, were issued during the years 1910 to 1912, but as no special appropriation was made for the printing and distribution of these volumes, only a limited number of copies of each volume was published. The many and continued demands for the report have seemed to require its reprinting in some form. The Bureau has, therefore, published a summary presenting briefly the more important results of the investigation within limits which will permit printing in sufficient quantity to supply reasonable demands.

While each of the 19 volumes of the report relates to a distinct subject, the subjects considered together fall into several groups, the first volumes dealing with four important industries: Cotton, men's ready-made clothing, glass, and silk, all employing large numbers of

women and children. With these may also be grouped three other volumes: Women in stores and factories; women in the metal trades; and women and children in miscellaneous factory industries. Two deal with special child labor problems: The reasons why children leave school to go to work; and the connection between the employment of children and juvenile delinquency. Three are historical, dealing with the history of child labor legislation; the history of women in industry; and the history of women in trade-unions. Four deal with questions of health; the effect of laundry work upon women; a study of infant mortality in Fall River; a study of the causes of death among cotton-mill operatives; and a study of hookworm disease as found in southern cotton-mill communities. Three others—a study of family budgets of cotton-mill workers; a discussion of the connection between occupation and criminality of women; and a study of labor laws and factory conditions in the States visited—complete the list.

The establishments included in the Bureau's investigation employed over 335,000 persons, of whom over 167,000, or approximately 50 per cent, were females. The most striking feature of this great labor force was the extreme youthfulness of those employed. In three of the industry groups, the southern cotton group, the glass industry, and the Pennsylvania silk group, more than two-thirds of the female employees were found to be under 20 years of age. On the other hand, the proportion 25 years of age and over was large enough to suggest the need for vocational training for girls. The importance of married women among these wage earners is shown by the fact that of 27 industries studied, only three were found in which the proportion of married women among those 20 years of age and over was under 10 per cent, and from this it runs up to two-fifths, and in one industry even to three-fifths.

Among the families from which the wage earners in these industries come, the industrial employment of girls is well-nigh universal. Thus, in the four industries which were the subject of intensive study, it was found that in some 5,000 families from 82 to 98 per cent of the families had girls 16 years of age and over at work, and that from 80 to 95 per cent of all the girls of this age group in these families were wage earners. That this employment was a matter of economic necessity is indicated by the fact that from 27 to 43 per cent of the total family income was contributed by girls in this age group, and that approximately 90 per cent of all the earnings were contributed to the family.

One of the most significant facts disclosed by the investigation in practically all industries was the large proportion of women wage earners who were paid low wages, wages in many cases inadequate

to supply a reasonable standard of living for women dependent upon their own earnings for support. In the group of women employed in the four great industries: Cotton; men's ready-made clothing; glass; and silk, from two-fifths to two-thirds of those 16 years of age and over earned less than \$6 in a representative week. In another group of 23 industries, an examination of the earnings of over 38,000 women 18 years of age and over showed that over 41 per cent earned less than \$6 in a representative week.

The report shows that the employment of children was both extensive and serious, not only were children found employed in great numbers, but they were found employed below the legal age; employed at work legally prohibited to children of their years; employed for illegally long hours and at illegal times; employed through evasion of the law and under false certificates of age, as well as under many other undesirable conditions. In spite of all of this, evidence was found of a decrease in the relative number of children employed, and very plain indications that a public sentiment against their exploitation is making itself felt effectively.

Since the publication of the Bureau's report many and important changes have been made in labor laws, especially in those affecting the conditions of employment of women and children and the health and safety of wage earners, regardless of sex and age.

It is not possible to say how far the findings of these reports have been directly instrumental in securing new labor legislation, for within the period since 1908 many agencies have been active in the work of investigation, discussion, and propaganda, in many cases using the data of these reports, in other cases supplementing them by further investigation along the same or other lines.

Most important of such supplementary investigations of an official character have been those of the various State minimum wage commissions, the workmen's compensation or accident commissions, some of the State bureaus or departments of labor, and the New York State Factory Investigating Commission. Most important of the unofficial agencies in the work of investigation and propaganda have been the National Child Labor Committee, the National Consumers' League, and the American Association for Labor Legislation. All of the agencies mentioned have contributed in an important way to the progress in labor legislation affecting women and children which has been so marked during the last seven or eight years.

Some definite idea of the breadth and strength of the movement for protective labor legislation during recent years may be gained by an examination of the legislation of the various States from 1908 to 1915. Thus, taking as examples some of the more important provisions for the protection of woman and child wage earners, we find

within this period the number of States prohibiting factory employment under 14 years of age increasing from 30 on January 1, 1908, to 41 in 1915, the number requiring medical examination or a certificate of physical fitness preliminary to the issue of work permits from 8 to 35, the number prohibiting night work under 16 years from 18 to 36, and the number limiting hours of work under 16 years to 8 per day from 3 to 21. Changes quite as striking are found in provisions affecting women. Since 1908 the number of States prohibiting night work for women increased from 3 to 6, the number limiting the hours of work in factories to 8 per day increased from none to 4, the number limiting hours of work to 10 a day increased from 15 to 34, while two classes of laws not known in any State in January, 1908, namely, minimum wage and mothers' pension laws, have been enacted, the former in 11 States, the latter in 29 States.

PROGRESS OF LEGISLATION AFFECTING THE EMPLOYMENT OF WOMEN (WITHOUT REGARD TO AGE) AND CHILDREN, 1908 TO 1915.

Subject of labor legislation.	States having laws Jan. 1, 1908.	States first enacting laws in specified years.								States having laws, 1915
		1908	1909	1910	1911	1912	1913	1914	1915	
Employment in factories prohibited under 14.....	¹ 30	1	1	.....	3	2	2	2	.....	41
Medical examination of children required for work permits.....	.....	.....	.....	1	1	4	4	1	2	13
Certificate of physical fitness of children required for work permits....	² 8	1	3	1	4	1	3	.....	1	22
Night work prohibited under 16.....	³ 18	2	4	.....	4	1	3	1	3	36
Night work prohibited for women....	3	.....	.....	.....	1	.....	2	(⁴)	.....	6
8-hour day under 16.....	³ 3	.....	4	.....	3	3	4	2	2	21
8-hour day for women in factories....	.....	.....	.....	.....	2	.....	⁵ 2	(⁴)	.....	4
10-hour day for women in factories....	15	.....	3	.....	4	3	5	.....	4	34
Minimum wage.....	.....	.....	.....	.....	.....	1	8	.....	2	11
Mothers' pensions.....	.....	1	.....	.....	3	1	16	.....	8	29
Factory inspection.....	29	1	3	.....	4	1	2	1	1	42
Workmen's compensation.....	.....	(⁶)	.....	1	10	4	7	1	8	31
Occupational disease reporting.....	.....	.....	.....	.....	6	2	7	.....	1	16

¹ Also the District of Columbia; employment forbidden only during school time in 3 States.

² Also District of Columbia.

³ Applies only to mercantile establishments and bakeries in 1 State.

⁴ District of Columbia.

⁵ Law of Arizona applies to bakeries, laundries, mercantile establishments, hotels, restaurants, and telephone and telegraph offices; factories are not mentioned.

⁶ United States law of May 30, 1908, covering Federal employees, was first compensation act.

The progress in labor legislation affecting women and children within this period is not adequately measured by the number of States enacting new laws, for much more effective enforcement has also been provided for by the creation of factory inspection in 13 States where formerly there were no inspectors, by increases in the personnel in other States, and by giving to factory inspectors in several of the States greatly increased powers.

The movement for workmen's compensation legislation and occupational disease reporting, which is entirely new within this period, is scarcely less important than that which has secured the classes of

laws already named, for the compensation laws have brought new standards of safety and sanitation affecting all employees, with new methods and powers of enforcement. Furthermore, the guaranty of compensation payments in case of fatal and serious accidents helps to maintain reasonable standards of living without forcing the dependent women and children of the injured workman's family into industrial employment.

SURVEY OF WAGE-EARNING GIRLS IN WILKES-BARRE, PA.¹

The National Child Labor Committee, with the cooperation of the National Consumers' League, made during the months of February to May, 1914, a statistical investigation of wage-earning girls 14 to 16 years of age in Wilkes-Barre, Luzerne County, Pa.

In the first part of the published report an attempt is made to give the setting of these workers—where they are working; the native country of their fathers; their family incomes; the disposal of their wages; the occupations of their parents; how they are housed. The second part is a study of the girls themselves—why they leave school; the grade reached at the time of leaving school; how old they are; how many of them take advantage of opportunities offered for further education; how widely they continue to speak the language of their foreign-born parents; why they choose their employment; hours of work; health conditions; and how much influence education and industrial experience have on their wages.

Specific information was received from 256 girls 14 to 16 years of age who had left school with labor certificates for the purpose of going to work, of whom 202 were employed in the silk and lace mills and 54 in 14 other industries. All of the girls scheduled were born in the United States, more than one-half of them being of foreign parentage.

Of the 302 girls reporting the disposal of their wages, 239, or 79.1 per cent, handed their wages over to their parents or guardians, while only 26, or 8.6 per cent, kept their wages.

Of 248 girl workers reporting the grade at which they left school, 106, or 42.7 per cent, had not reached the seventh grade, and the investigation showed that more left school (29.4 per cent) at that grade than at any other. Only 27.8 per cent remained in school beyond the seventh grade. At the time of the survey children were permitted by law to leave school with working papers at the age of 14 years, irrespective of grade, but without certificates they must attend school from the sixth to the sixteenth birthday.

¹ Survey of Wage-earning Girls Below 16 Years of Age in Wilkes-Barre, Pennsylvania, by Sarah H. Atherton. Published by the National Child Labor Committee, 105 East Twenty-second Street, New York City. 1915. 65 pp.

In that portion of the report devoted to industrial experience, after suggesting, as already noted, that most of the girls (202, or 78.9 per cent, of the 256 girls giving specific information) are employed in the silk and lace mills, it is pointed out that of 302 girls reporting 14.6 per cent had an opportunity to choose their work, while 33.1 per cent had no such opportunity. It was found that the grade at which these girls left school had very little effect upon the wage received, and also that the length of their industrial experience as a whole seemed to bear no direct relation to wages. In Pennsylvania, at the time of this investigation, the legal limit for female labor was 54 hours per week, and the investigation seemed to indicate that in general the majority worked the full number of hours—10 hours per day on 5 days and 4 on Saturday.

Of the girls reporting, 27.9 per cent indicated a preference for moving pictures as a means of recreation, with reading, music, and sewing following in the order named. Of the 267 answering the question as to dress, 215, or more than 80 per cent, are classed as "neat," 2 as "showy," 15 as "untidy," and 22 as "shabby."

In conclusion the report gives a summary of the child-labor law of Pennsylvania as amended in 1915, together with some suggestions for its improvement, and a summary of the more important results of the survey. The suggestions offered are as follows:

1. More adequate provision for factory inspection. The intricate laws dealing with safety in industry, ventilation, fire protection, sanitation, and the hours of labor for women and children are to be enforced throughout the factories, stores, hotels, amusement halls of three counties in a highly industrialized region. Good laws without provision for adequate enforcement are almost more pernicious than bad laws, since they give a sense of false security.

2. Improved administration of the widows' pension fund, so that a widow need not in future do the work of two persons to support her children.

3. Vocational training designed not merely to increase earning capacity.

4. Annual medical examination of girls under 16 in mills.

5. Compulsory courses in home economy required of all girls before they leave school.

6. A living wage to men. Wherever a living wage is not paid, that industry is subsidized either by industries which do pay a living wage, i. e., family incomes are eked out by those with higher wages sharing with those who have less, or by the public, who eke out insufficient wages by supporting hospitals and poor boards, etc.

The findings of the survey are summarized as follows:

Industry and school.—Of girls 14 to 16 years of age there are 40.9 per cent in industry and 59.1 per cent in school.

Dependence on girls under 16 years of age.—Silk industry is dependent for 12.8 per cent of its labor force. The lace industry is dependent for 7.5 per cent of its labor force. In all industries where girls are employed the percentage under 16 is 8.8.

Distribution according to occupation of fathers.—The charge that industries move to mining regions for labor of miners' families is partially justified—more miners have children in the mills than other men.

Population.—In every 46 males of voting age—native, white, of native parentage—there is a girl of similar parentage under 16 at work; in every 72 males of voting age—foreign born and naturalized—there is a girl of foreign parentage under 16 at work.

Weekly income of family with girl's wages and rent deducted.—Forty-six and four-tenths per cent of the families get under \$2 a week per capita income.

Weekly income of family with rent deducted and girl's wages included.—Thirty per cent of these families get under \$2 per capita income.

Disposal of wage.—All parents, save six, use part or all of their daughters' wages.

Fathers.—Sixty-two and seven-tenths per cent are at work; 8.1 per cent are idle; 18.5 per cent dead; 2 per cent deserters or away; 8.7 per cent do not report.

Causes of nonsupport by fathers.—Seventy per cent, death; 21.3 per cent, illness or accident; 3.8 per cent, slack work, etc.

Mothers.—Eighty-two and four-tenths per cent are at home; 11 per cent are at work; 0.7 per cent are deserters or away; 5.9 per cent are dead.

Crowding.—Austro-Hungarians show worst crowding; then Italian; then English and Irish.

Reasons for leaving school.—"Necessity" is the most frequent, then discontent with school.

Number leaving school according to grade.—More leave at the seventh grade than any other. The highest per cent of English, Swedish, and Welsh leave at the eighth grade. Forty-two and seven-tenths per cent leave before they reach the seventh grade.

Number leaving school according to age.—Twenty-one and nine-tenths per cent leave before they attain the required age of 14 years.

Boys and girls illegally out of school.—The law requires children who are not at work to be in school. Over 50 per cent who left school on labor certificates do not appear in list of employees under 16, required of employers.

Use of outside educational agencies.—Ten and nine-tenths per cent have taken advantage of any opportunity for further education in the way of night school, Y. W. C. A., etc.

Age of girls at work.—Twenty-nine and seven-tenths per cent are 14; 48.8 per cent are 15.

Industry and age.—Of 76 girls of 14 years, 61 are in the lace and silk industries. Of 125 girls of 15 years, 101 are in these industries.

Why places of employment were chosen.—Thirty-three per cent had no opportunity for choice; 14 per cent had opportunity for choice.

The relation of wage, age, and grade.—The highest per cent of those now 14 who left at the sixth grade get from \$3 to \$3.49, while those now 15 who left at the seventh grade get from \$4 to \$4.49. Those 15 years of age leaving at the sixth grade get \$3.50 to \$3.99; here one grade more seems an advantage. As a whole, however, grade has no consistent relation to wage. Those 14 years of age leaving at the fifth grade show highest per cent in the same [wage] column as those 15 years of age leaving at the eighth grade.

Grade, wage, and length of time since leaving school.—Neither grade nor length of time since leaving school has any consistent influence on wage.

Amusements.—Moving pictures are the most important; dancing, cards, and outdoor exercise of all kinds are conspicuously rare.

Dress.—Two were "showy" in comparison to 22 "shabby."

Ambitions.—Dressmaking is the favorite career. The second favorite among girls is musician, among parents "business course." Ten per cent of the girls report that they have none; 7.4 per cent of the parents report that they have none.

RECENT REPORTS RELATING TO WORKMEN'S COMPENSATION AND INDUSTRIAL ACCIDENTS.

MASSACHUSETTS.¹

During the operation of the workmen's compensation act for the year ending June 30, 1914, as set forth in the second annual report of the State industrial accident board issued on January 20, 1915, 96,382 nonfatal and 509 fatal injuries were reported, the total representing an increase of 7.4 per cent over the previous year. Of the nonfatal cases 83,920, or 87 per cent, were insured and of the 509 fatal cases 371, or 72.88 per cent, were insured and 138 were not insured, the only method for recovering damages open to the latter being in suits at common law, in which event the three common-law defenses formerly available to employers would be removed. Of the 138 not insured 57.2 per cent were employed on steam railroads.

Based on mean duration of total disability, the aggregate number of days lost as a result of nonfatal industrial accidents was 1,336,966 and the aggregate number of weeks lost was 190,995. This loss of time represented a total wage loss of \$3,172,440. Of this total loss of wages \$2,760,023 was suffered by insured employees. The average duration of total disability per reported nonfatal case was 13.87 days, but eliminating those cases in which incapacity extended for less than one complete day the average number of days lost per case was 24.26. The following table presents a comparison of the duration of total disability for the year ending June 30, 1913, and June 30, 1914, showing that the noncompensable cases, that is, those injuries lasting less than two weeks, were fairly constant for each period.

¹ Second annual report of the industrial accident board, July 1, 1913, to June 30, 1914. Boston, 1915. 483 pp. Illustrated.

COMPARISON OF DURATION OF TOTAL DISABILITY FOR YEARS ENDING JUNE 30, 1913, AND JUNE 30, 1914, SHOWING PER CENT OF DISABILITY LASTING ONE DAY OR OVER.

[Based on injuries reported to the board and not on cases handled by insurance companies.]

Length of disability.	1913			1914		
	Num-ber of cases.	Per cent.	Per cent disabilities 1 day and over.	Num-ber of cases.	Per cent.	Per cent disabilities 1 day and over.
Less than 1 day.....	36,901	40.92	.....	41,269	42.59	.....
1 to 3 days.....				11,458	11.83	20.60
4 to 7 days.....				12,843	13.26	23.09
8 to 10 days.....				4,517	4.66	8.12
11 to 14 days.....				5,236	5.40	9.41
Total, 1 to 14 days.....	31,685	35.14	59.48	34,054	35.15	61.22
Total, 2 weeks and under (noncompensable).....	68,586	76.06	59.48	75,323	77.74	61.22
15 to 28 days.....	10,568	11.72	19.84	9,222	9.52	16.58
5 to 8 weeks.....	6,638	7.36	12.46	7,066	7.29	12.70
9 to 13 weeks.....	2,355	2.61	4.42	2,549	2.63	4.58
14 to 26 weeks.....	1,275	1.41	2.39	1,491	1.54	2.68
Over 6 months.....	272	.30	.51	731	.75	1.31
Fatal.....	474	.53	.89	509	.53	.92
Total, 15 days and over (compensable).....	21,582	23.93	40.51	21,568	22.26	38.77
Grand total.....	90,168	100.00	100.00	96,891	100.00	100.00

It is interesting to note that while the total number of cases in which the injury lasted more than two weeks is almost identical for each year, the number of injuries lasting six months and over increased from 272 to 731, or 16.87 per cent.

Returns from insurance companies show that the estimated payments for medical and hospital attention, compensation for disability and dependency, together with outstanding losses payable to dependents and to those with continuing disabilities for the year ending June 30, 1914, amounted to \$2,621,752.91. This amount does not include any of the expenses of insurance administration.¹ The in-

¹ In the report of the Massachusetts insurance commissioner for the year 1914 it is stated that insurance companies transacting workmen's compensation business covering a period of 27 months collected in premiums \$8,892,535 and paid out in benefits \$3,497,063, thus requiring only 39.3 per cent of actual earned premiums to pay all their losses. Based on figures contained in that report the amount of premium earned in the nine months ending September 30, 1914, was \$3,639,868, and the total benefits paid amounted to \$1,783,220, or approximately 49 per cent of the earned premiums. So far as the expense of conducting the business is concerned the commissioner is of the opinion that "30 per cent of the premium ought to be an outside allowance to the companies, and that at least 70 per cent ought to be available for payment of benefits. No stock company has yet kept its expense within that limit, and while they continue to pay 17½ per cent for getting the business, leaving only 12½ per cent for all other expenses and for profits on the basis of a 70 per cent loss ratio, it is evident that closer figuring on expenses than has yet been made will have to be adopted unless they cut the acquisition cost. For workmen's compensation insurance it should be reduced, for it is in effect compulsory upon employers. There is no reason for taking \$17.50 out of every \$100 the employer pays for his insurance and handing it over to a middleman. The total acquisition cost for this business should be limited to 10 per cent. This is public-welfare business and not agency-welfare business, and all unnecessary burdens should be removed."

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crease in payments and estimates on outstanding losses, including medical service, over the first year of the act amounted to 56.3 per cent, which increase is probably due largely to the very considerable increase in the proportion of those injured who were insured.

Based on the 41,383 fatal and nonfatal injuries handled by the insurance companies during the year ending June 30, 1913, the average compensation paid per case, including medical and hospital service, was \$40.50, while the average per case for the 60,160 handled during the following year was \$43.57. The result of the operation of the workmen's compensation law for the year ending June 30, 1914, is indicated by the following transactions of all insurance companies doing business in the State:

Number of employees receiving medical service only...	42, 798	
Number of employees receiving compensation only.....	3, 008	
Number of employees receiving both medical services and compensation.....	14, 029	
Total receiving benefits.....		59, 835
Number of cases reported requiring neither payment of compensation nor medical expense.....	28, 118	
Number of fatal-injury cases reported in which depend- ents totally dependent for support upon the employee were left.....	219	
Number of fatal-injury cases in which dependents par- tially dependent were left.....	69	
Number of fatal-injury cases in which no dependents were left.....	37	
Total fatal-injury cases in which compensation was paid.....		325
Total fatal and nonfatal cases receiving benefits.....		60, 160
Total compensation paid all injured employees and de- pendents of all fatally injured employees.....	\$882, 162. 30	
Payments covering medical and hospital services and medicines.....	446, 171. 52	
Estimated liability on account of compensation due in- jured employees and their dependents covering the amount of deferred payments for losses incurred and the estimated cost of undetermined losses.....	1, 183, 340. 16	
Estimated liability on account of medical services ren- dered but not yet paid.....	110, 078. 93	
Total benefits paid and estimated liability out- standing.....		\$2, 621, 752. 91
Compensation paid in fatal-injury cases in which de- pendents totally dependent survived.....	57, 396. 33	
Estimated liability on account of deferred payments under item 12.....	440, 279. 74	

Compensation paid in fatal-injury cases in which dependents partially dependent survived.....	\$12, 171. 25
Estimated liability on account of deferred payments under item 14.....	59, 830. 26
Payments covering fatal-injury cases where no dependents survived.....	3, 611. 03
Estimated liability on account of deferred payments under item 16.....	5, 417. 14

Total paid and estimate liability in fatal cases
(included in total of items 8 to 11)..... \$578, 705. 75

In the classification of nonfatal accidents by industries, iron and steel ranks first with 17,176 injuries and the textile industry comes second with 14,508 injuries. Of the fatal injuries, 174 occurred in road, street, and bridge transportation, 74 occurred in the building trades, and the remaining 261 were scattered among 20 other industries, including the miscellaneous group. The number of accidents per 1,000 employees for 25 selected branches of industry was highest in the automobile factories, being 287, and lowest among the clothing makers, being 22. The value of these figures, however, is seriously impaired because the factor of the number of hours or days worked is not available for the purpose of weighting the element of exposure.

An analysis of causes of nonfatal accidents shows that 32 per cent were due to hand labor, 25 per cent were caused by machinery, and 43 per cent were due to all other causes. Of the 509 fatal accidents hand labor was responsible for 5 per cent, machinery for 17 per cent and all other causes for 78 per cent. More than 91 per cent of the nonfatal cases and 99 per cent of the fatal cases were males. In both the fatal and nonfatal groups the largest number of persons affected were receiving between \$11.01 and \$12 per week, the per cent in the former group being 15.3 and in the latter, 12.1. The largest number, 23.3 per cent, of those fatally injured were between the ages of 40 and 49, while of those nonfatally injured the largest number, 37 per cent, were from 21 to 29 years of age.

The report suggests that workmen's compensation has to a large extent superseded the system of employers' liability. In 1911 there was collected in premiums for employers' liability insurance \$1,680,-280, while the net recovery by employees, after the different expenses of litigation were deducted, was estimated to be about \$400,000, or 23.8 per cent of the premiums. This amount represents about 15 per cent of the payments and estimates on outstanding losses received by employees under the benefits of the workmen's compensation act for the second year ending June 30, 1914. During the first year of the compensation act, ending June 30, 1913, it is estimated that the premiums collected for employers' liability insurance decreased 87

per cent, while the decrease in the losses paid was estimated at 54 per cent. On the other hand, according to the report of the State insurance commissioner, insurance companies collected in premiums, under the compensation law, during 27 months ending September 30, 1914, a total of \$8,892,535, and paid in benefits \$3,497,063, or 39.3 per cent of earned premiums. Thus under the liability law a much lower percentage of benefits was available to the injured employee than under the compensation act, while a correspondingly higher percentage was absorbed in expenses of administration, litigation, etc. The payments during the year ending June 30, 1914, namely, \$2,621,752.91, represented an increase of \$944,372.09 over the first 12-month period, which increase was due to the greater number of injured employees insured under the act, to increasing efficiency in administration, to an increased number of agreements in proportion to the number of injuries, and in general to the better understanding on all sides of the scope and real intent of the law. In the year July 1, 1913, to June 30, 1914, the employees of Massachusetts lost in wages \$3,172,440. In addition to the suffering and other intangible results of injuries in the aggregate there was a money loss to employees, contributed as their share of the cost of industrial injuries, of at least \$1,000,000. The cost of providing compensation benefits borne in the original instance by the employers, but ultimately intended to be shifted to the consumer, amounted to \$4,590,000, which on a total pay roll of \$450,000,000 represented an average rate of approximately 1 per cent. The value of manufactured products reported by the Massachusetts bureau of labor statistics for the year 1913 was \$1,658,728,363. The total amount of wages earned was \$351,299,706. By reducing this figure to the probable amount covered by insurance, and estimating the premium in accordance with the average rate, it is found that in manufacturing industries the premiums would aggregate at least \$3,000,000. According to the returns for 1913, therefore, the cost of insurance shifted to the consumer of manufactured product would amount to only 18 cents per \$100 value. This includes both the cost of losses and the cost of insurance administration.

One feature of the payment of compensation in Massachusetts is the authority granted the board to make lump-sum settlements. These, however, must be approved by the full board before they become effective, and the conditions under which the payments are made are three: (1) The case must be unusual, (2) the settlement must be for the best interests of the employee or his dependent, and (3) the amount fixed must be adequate. The determination of this last point was found to be difficult, because it is almost impossible to tell in advance how long the injured employee will be incapacitated, to what extent the reparative process has developed at the time of

the award, and to what extent there will be impairment in earning ability, etc. In this connection computed percentages of disability for specific injuries based on compensation awards in various State and according to various foreign standards and authorities are used.

The board made a study of cases of fatally injured employees whose employers were not insured under the workmen's compensation act, and secured information from 75 dependents of the 138 workers in this group. The average age of the deceased employees was 37.6; the average weekly wage was \$14.94. In 10 of the cases there were no dependents; in the remaining, 39 widows, 83 children, and 28 parents, brothers, and sisters were dependent upon the deceased employees. The total amount paid to dependents was \$35,885, an average of \$478.47 per case. Under the workmen's compensation act these dependents would have received \$122,357.75, an average of \$1,631.44 per case. In these 75 cases considered there were 31 settlements made. The report suggests that the reason no settlement was made nor information received in a number of cases may be attributed to the fact that many of the injured workmen were foreigners whose families were living in Europe and who, through ignorance of the law or method of procedure in this country, neglected to make any claim. It was found that the actual settlement made in many cases was in no way proportionate to the wages received and the dependency involved. In 10 cases in which settlements were made in excess of the amount which would have been due under the act the total amount paid was about 68 per cent more than the amount payable under the act, whereas in the remaining cases the settlements made were less than one-third of the amount which these dependents would have received had the employees been insured. "Some large awards were made in cases where the dependency was comparatively slight, while families totally dependent upon the wages of the employee received a pitiably small amount, if any."

In Massachusetts compensation is paid to all employees who are incapacitated for work by reason of occupational diseases arising "out of and in the course of their employment." In all, 354 non-fatal and 8¹ fatal cases were registered with the board during the year covered by the report. These were grouped into three main divisions: (1) Those due to harmful substances causing constitutional disturbances, (2) those due to harmful conditions, and (3) those due to irritant fluids and substances resulting in local affection. The experience of the board in this connection is indicated by the following summary:

¹ This is quoted from the text of the report. In the table which follows, also taken from the report, 10 fatal accidents are shown. No explanation is offered for this difference.

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PERSONAL INJURIES BY DISEASES OF OCCUPATION, JULY 1, 1913, TO JUNE 30, 1914.

Classification.	Industry.	Cases.				Nonfatal cases.			
		Non-fatal.	Total.	Fatal.	Total.	Days lost.	Total.	Wages lost.	Total.
<i>Harmful substances.</i>									
Arsenic.....	Other chemical workers.....	1	1			12	12	\$19	\$19
Dusts.....	Marble and stone cutters.....			1					
	Flour and grain mills.....	1				21		42	
	Foundries and metal working.....	1	2		1	365	386	954	996
Gases, vapors, and fumes.	Building and hand trades.....	1				196		280	
	Paint makers.....	1				1		2	
	Other chemical workers.....	1							
	Automobile factories.....	1				85		151	
	Other iron and steel workers..	1				6		12	
	Printing and publishing establishments.	1							
	Rubber factories.....	1				31		53	
	Construction and maintenance of streets, roads, sewers, etc.	1	8			2	321	7	506
Hides (anthrax) ...	Tanneries.....	3		1		132		158	
	Water transportation.....	3	6	1	2	69	201	142	309
Lead.....	Building and hand trades.....	3				175		472	
	Paint makers.....	1		1		18		35	
	Glass makers, workers.....	1				26		56	
	Car and railroad shops.....	3				96		272	
	Foundries and metal working.....	1				30		49	
	Wagons and carriages.....	1				67		145	
	Jewelry factories.....	1							
	Printing and publishing establishments.	3				176		418	
	Electrical supplies.....	1				42		63	
	Construction and maintenance of streets, roads, sewers, etc.	1				45		108	
	Street railways.....	2				300		827	
	Wholesale and retail trade.....	1	19		1	28	1,093	60	2,505
Mercury.....	Ship and boat building.....			1	1				
<i>Harmful conditions.</i>									
Extreme cold.....	Ice harvesting.....	8				361		560	
	Building and hand trades.....	4		1		336		447	
	Fertilizer makers.....	2				137		232	
	Bakeries.....	1							
	Fish curers and packers.....	1				70		120	
	Flour and grain mills.....	1				63		108	
	Slaughter and packing houses.....	2							
	Sugar makers and refiners.....	1				2		5	
	Foundries and metal working.....	4				3		5	
	Ship and boat building.....	1				6		10	
	Tanneries.....	3				88		138	
	Breweries.....			1					
	Box makers (wood).....	1				21		26	
	Furniture.....	2				4		8	
	Cotton mills.....	3				66		106	
	Print works.....	1				13		18	
	Woolen and worsted mills.....	2				8		15	
	Electric light and power companies.....	4							
	Gas works.....	4				20		54	
	Water transportation.....	6				203		345	
	Construction and maintenance of streets, roads, sewers, etc.	15				474		970	
	Truck, transfer, cab, and hack companies.....	7				407		794	
	Streets railways.....	11				128		238	
	Steam railroads.....	4				58		112	
	Express companies.....	1				4		7	
	Telegraph and telephone.....	1				42		104	
	Wholesale and retail trade.....	30				507		975	
	Warehouses and cold-storage plants.....	3							
	Other persons in trade.....	1				19		68	
	Professional service.....	1	125		2	14	3,057	28	5,493
Extreme heat.....	Fertilizer makers.....	1				4		6	
	Bakeries.....	3				30		39	
	Sugar makers and refiners.....	1				6		10	

PERSONAL INJURIES BY DISEASES OF OCCUPATION, JULY 1, 1913, TO JUNE 30, 1914—
Continued.

Extreme heat.....	Breweries.....	1							
	Printing and publishing establishments.....	1			5				
	Cotton mills.....		1						
	Woolen and worsted mills.....	1							
	Rubber factories.....	3			7		13		
	Gas and electric light companies.....	2		1	8		20		
	Street railways.....	3							
	Steam railroads.....	2			6		12		
	Wholesale and retail trade.....	2			7		13		
	Occupations not in industries.....	1	20		3	4	77	7	128
Eye strain.....	Electrical supplies.....	1	1						
Strain, fatigue, cramp, faulty positions, "occupational neuroses," blows, vibration, pressure, etc., causing injuries to nerves, muscles, and bones.	Building and hand trades.....	1			365		1,300		
	Foundries and metal working.....	2			5		9		
	Ship and boat building.....	1			23		18		
	Other iron and steel workers.....	1			17		24		
	Shoes.....	1			37		56		
	Wholesale and retail trade.....	1	7		7	454	10	1,417	
Irritant fluids and substances.									
Brass.....	Brass mills.....	1			38		73		
	Other metal workers.....	1			28		38		
	Electrical supplies.....	1	3		2	78	5	116	
Chrome.....	Tanneries.....	1			220		390		
	Printing and publishing establishments.....	1			20		111		
	Cotton mills.....	1							
	Woolen and worsted mills.....	2	25			250		501	
Cyanide and plating solutions.	Other iron and steel workers.....	3			22		28		
	Other metal workers.....	1							
	Other miscellaneous industries and occupations.....	1			3		4		
	Wholesale and retail trade.....	1	6		24	59	31	73	
Dyes.....	Shoes.....	1			14		21		
	Tanneries.....	1							
	Cotton mills.....	1			28		46		
	Print works.....	5			157		202		
	Woolen and worsted mills.....	7			98		134		
	Wholesale and retail trade.....	1	16		18	315	18	421	
Hides.....	Shoes.....	3			16		26		
	Tanneries.....	12	15		45	61	71	97	
Lime.....	Other iron and steel workers.....	1			4		7		
	Harness and saddle makers and repairers.....	1			7		13		
	Shoes.....	1			4		5		
	Tanneries.....	3	6		19	34	27	52	
Oil.....	Iron and steel mills.....	1							
	Other iron and steel workers.....	5	6		45	45	93	93	
Paint.....	Building and hand trades.....	2			84		205		
	Electrical supplies.....	2	4		7	91	16	221	
Poisonous vines, trees, shrubs, etc.	Building and hand trades.....	1			32		96		
	Foundries and metal working.....	1			19		23		
	Other liquor and beverage workers.....	1			14		21		
	Other woodworkers.....	1			3		5		
	Construction and maintenance of streets, roads, sewers, etc.....	2			11		71		
	Real estate.....	1	7		4	116	8	221	
Raw wool.....	Tanneries.....	11	11		14	14	24	24	
Washing and cleaning fluids.	Print works.....	1			17		33		
	Woolen and worsted mills.....	3			136		178		
	Banking and brokerage.....	2	6		9	163	11	232	

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PERSONAL INJURIES BY DISEASES OF OCCUPATION, JULY 1, 1913, TO JUNE 30, 1914—
Concluded.

Classification.	Industry.	Cases.				Nonfatal cases.			
		Non-fatal.	Total.	Fatal.	Total.	Days lost.	Total.	Wages lost.	Total.
<i>Irritant fluids and substances—Con.</i>									
Local irritation from constant vibration, blows, pressure, etc.	Building and hand trades.....	1							
	Foundries and metal working.....	2				75		299	
	Other iron and steel workers..	4				176		342	
	Shoes.....	1				28		56	
	Jewelry factories.....	1				21		33	
	Cotton mills.....	1				5		6	
	Gas works.....	1				13		33	
	Other miscellaneous industries and occupations.	1				14		19	
	Street railways.....	1				35		60	
	Steam railroads.....	3				31		42	
Miscellaneous.....	Laundries and laundry work.	1	17			25	423	43	942
	Forestry.....	1							
	Building and hand trades.....	4				15		31	
	Other chemical workers.....	3				52		91	
	Other food preparers.....	1				28		48	
	Foundries and metal working.	3				7		10	
	Other iron and steel workers..	5				74		104	
	Leather belt, leather case, and pocketbook makers.	1				9		15	
	Shoes.....	8				343		553	
	Tanneries.....	1							
	Furniture.....	2				27		79	
	Box makers (paper).....	2				58		49	
	Printing and publishing establishments.	3				37		47	
	Electrical supplies.....	4				9		22	
	Gas works.....	1				77		154	
	Other miscellaneous industries and occupations.	1							
	Workers in "not specified" manufacturing and mechanical industries.	1							
	Wholesale and retail trade....	1				49		32	
	Occupations not in industries.	1	43				785		1,235
Total.....			354		10		8,134		15,582

In a chapter on compensation benefits the statement is made that from the point of view of administration the Massachusetts law is good, but that its provisions for permanent disability should be improved. By an amendment which went into effect October 1, 1914, the rate of compensation was increased from 50 per cent to 66 $\frac{2}{3}$ per cent of the loss in average weekly wages. Moreover the maximum period of payments in case of death and either partial or total disability has been extended to 500 weeks, with \$4,000 as the maximum amount of compensation which may be paid. For the purpose of determining the adequacy of the provisions of the compensation law this chapter is devoted to a comparison between it and the California workmen's compensation, insurance, and safety act. It is explained that the California law is chosen because it is the only such law in force in this country wherein an attempt is made to construct a schedule of benefits in which weight is given to the varying effects of different kinds of injury on persons of different

ages and engaged in different kinds of occupation. Examples are given to indicate the probable award which would be made in California in a few actual cases of permanent disability taken from the Massachusetts experience. A tabulated comparison of the benefits under the two laws is presented.

During April, May, and June, 1914, the board, operating through its inspection department, carried on a campaign of factory inspection for the purpose of promoting accident prevention and encouraging employers to form safety committees to assist in reducing the number of accidents in their plants. The data were collected from 48 factories employing 56,587 workers, and covered two 6-month periods, one ending December 31, 1913, preceding the inspection, and the other ending December 31, 1914, after the inspectors had conferred with employers and suggested methods for eliminating causes of accidents. This information is summarized in the following table:

COMPARATIVE NONFATAL ACCIDENT EXPERIENCE OF 48 SELECTED FACTORIES FOR TWO 6-MONTH PERIODS, ONE BEFORE AND ONE AFTER THE ACCIDENT PREVENTION METHODS WERE IN FORCE.

[A reported accident is a notice of injury made to the board by the employer and all reports so made are included whether or not there was any disability or charge on account of medical attention. A disability case is one in which there was disability on any day or shift other than the one on which the injury occurred. A compensation case is one in which compensation was paid for total disability when this disability was still existent or after the fifteenth day following the occurrence of the injury. A lost day is one in which there was disability on any other day than the one on which the injury occurred. A compensation day is one on which compensation was paid for one day to one person for total disability. The wage loss is based on the average weekly earning shown on the various accident reports taken in conjunction with the period of total disability. Compensation paid is derived from the amount so paid in each case on account of total disability.]

Classification.	Number for 6 months ending—		Per cent of decrease.	Average per concern for 6 months ending—		Average per 100 employees for 6 months ending—	
	1913	1914		1913	1914	1913	1914
Reported accidents.....	2,403	1,901	20.89	50.06	39.60	4.24	3.35
Disability cases.....	1,138	907	20.30	23.70	18.89	2.01	1.60
Compensation cases.....	422	301	28.67	8.79	6.27	.74	.53
Days lost.....	22,548	14,237	36.85	469.75	296.60	39.84	25.15
Compensation days.....	11,476	6,401	44.21	239.08	133.35	20.28	11.31
Wages loss.....	\$34,667	\$22,195	35.98	\$722.22	\$462.39	\$61.26	\$39.22
Compensation paid.....	\$9,035	\$5,329	41.02	\$188.21	\$111.02	\$15.96	\$9.41

In this comparison no serious attempt was made to procure the average number of full-time workers in each concern, and the total number of employees given, 56,587, represents the average at any one time in the course of the year. The number reported to the board at the time of the inspection has been made to serve for the two periods considered. This being the fact and no account therefore having been taken of the inevitable fluctuation in the number of persons employed and in the number of days in operation of the various factories, thus eliminating the element of exposure, the comparisons of the above table are rather unsatisfactory.

The costs and wage loss given above show only that part which is due to lost time for total disability and do not include the entire money loss due to accidents.

Other real costs not included are those on account of medical and hospital service, additional compensation for specific injuries and compensation for partial disability. Likewise time lost on account of partial disability is not included. These figures, while necessary for computing the cost of insurance, were not considered essential for the purpose of the study here made. While the cost of medical attention might well be included, such information was not readily available when the data were compiled. In this campaign the ultimate aim of the board was to impress upon all concerns the fact that a real reduction of accidents may be accomplished, first, through the agency of eliminating unsafe conditions, and second, by organizing for safety. Efficient organizations in which conditions are kept up to a standard which should be constantly raised is a most vital factor for the reduction of accidents and the enormous economic loss thereby entailed and for the ultimate solution of the problem of reducing the cost of insurance.

In connection with accident prevention in industries the report shows, as already indicated, that the average amount of compensation benefits for the 60,161 cases handled by insurance companies was, in 1913, \$40.51, and in 1914, \$43.57. It is stated that two years of extensive and classified study has led the board to conclude that at least 40 per cent of the accidents arising out of and in the course of employment may be avoided and prevented by the introduction of efficient safety devices and the organization of safety committees in cooperation with the board. During the first two years, administration of the workmen's compensation act 186,076 nonfatal and 983 fatal injuries were reported, although the total reported by insurance companies as receiving benefits was 101,544. Based on this figure the average sum paid for and estimated as outstanding in compensation benefits per case was \$42.33, while the actual premium cost was slightly in excess of \$107 for each case. By reason of the injuries above referred to employers lost the services of experienced workmen for a total of 2,493,753 working days, and the actual wage loss to the employees was \$6,137,665. The value of the economic loss to the employer by reason of the substitution of less efficient employees constitutes a heavy tax on industry often overlooked. At least 50 per cent of this loss, it is believed, may be saved to employers and employees. A detailed plan for the organization of safety committees is given, and it is the opinion of the board that if such plan were put into effect it would eventually result in a saving by employers of an average of nearly \$40 on every injury reported to the board which

subsequently is prevented. It is also claimed that the employers may save through such organizations at least 50 per cent of loss in wages sustained by them on account of injuries.

The inspection department was organized at the beginning of 1914, and its work covering nearly 11 months is reported. During that time 3,157 investigations were made in every part of the State. Among matters investigated were circumstances and facts of particular accidents necessary to determine whether they occurred "out of and in the course of employment," whether either employer or the employee was guilty of serious and willful misconduct, the extent and duration of the disability, both total and partial, the average weekly rate of wages of the injured employee on which his compensation should be based, the extent and reasonableness of medical and hospital services rendered, and, in fatal cases, all the facts relating to dependency. In addition, 145 industrial establishments, employing 110,000 workers, were inspected and a copy of the inspector's report and recommendations was sent to each employer. The replies received indicate that this feature of the work is meeting with general cooperation on the part of employers.

The cooperation of insurance companies in the matter of accident prevention and reduction is commended, and evidence of this assistance is furnished in statements submitted for publication in the report giving the attitude of the various companies toward accident prevention and reciting some results accomplished. About 100 pages of the report are devoted to these statements, including illustrations of various methods of safeguarding machinery.

Two years experience in Massachusetts has prompted the industrial accident board to make certain recommendations for changes in the compensation law. For many accidents no compensation is available either to the injured employee or his dependent family in case of death. The board believes that this condition is due to the fact that the law is elective and not uniform in its application, and recommends that legislation be enacted to make the statute apply to all employers and to employees and their dependents within the classes mentioned in the present elective act, and to such others who on conditions may be included.

Of several other recommendations included in the report two are of sufficient importance to merit specific reference. The present act provides a waiting period of two weeks during which medical attendance is furnished but no compensation paid. The important reason for a waiting period is to discourage malingering, and since it is stated that "such cases are practically unknown in this Commonwealth" the board recommends that the law be changed so as to provide for a waiting period of 10 days in all cases in which the incapacity does not

exceed 28 days, and in all other cases where the period of incapacity exceeds such period of 28 days from the date of injury compensation should date back to the day of injury.

The board also recommends that the maximum weekly amount payable in all cases under the statute be changed from \$10 to \$14, the minimum payment to remain as it now is, at \$4 weekly. When the general statute was amended increasing the rate of compensation from 50 per cent to 66 $\frac{2}{3}$ per cent of the average weekly wage of the injured employee no change was made in the minimum and maximum weekly payments and it is believed that the skilled employee should receive at least a share of the benefits provided by the increase in the rate of compensation.

In a chapter devoted to the comparative cost of compensation under different scales of benefits, an analysis is presented to establish a reasonably accurate set of loss cost differentials which will indicate the effect of changes in the law as suggested above. The board estimates that—

If the benefits which went into effect October 1, 1914, had been operative in the period July 1, 1913, to June 30, 1914, the increase in the cost of compensation would have been approximately 40 per cent and the increase over the cost of the present law due to proposed amendments would have been 12 per cent. Insurance companies have reported to the Industrial Accident Board figures which show the paid and estimated outstanding losses in compensation claims. If we take their figures for the year July 1, 1913, to June 30, 1914—\$2,299,330.60¹—and increase this amount by 40 per cent, we get \$3,219,330.60, as an estimate of payments which would have been made in this period if the present law had then been in effect. The addition of 12 per cent to this amount results in the estimated cost under the proposed amendments if effective in this period. Such increase makes the total estimate of cost under the changes considered \$3,605,650.27, or an additional cost of \$386,319.67. Analysis of the factors which result in the increase of 12 per cent shows that the total increase would be 3 per cent if no change were made in the waiting period. Since 3 per cent is one quarter of 12 per cent, and the total increase in dollars is estimated at \$386,319.67, one-quarter of this amount, or \$96,579.91, represents the increased cost due to increasing the maximum weekly compensation to \$14. The balance of \$289,799.76 is the estimated cost due to a reduction in the waiting period.

As indicating the manner in which the act has been interpreted by the board and applied in cases arising for settlement, 27 pages of the report are devoted to a statement of rulings and decisions under the act. This is followed by a chapter presenting a survey of workmen's compensation legislation in the various states.

Included in the report is a gallery of injured workmen with a brief comment on each case.

¹ This does not agree with the amount given on pp. 24 and 472 of the report, and the discrepancy is not explained.

OHIO.

In the Statement of the Condition of the Ohio State Insurance Fund, as of November 15, 1915, it is asserted that had the plan ceased operating on that date it would return to the employers \$697,279.36, which would be over and above all amounts necessary to bring to full maturity every single claim and all collected unearned premiums, and would be made up of the following items:

Interest received from premium deposits.....	\$182, 408. 26
The 5 per cent premium required of all self-insurers.....	142, 174. 27
Catastrophe reserve developed by State risks.....	346, 003. 48
Net surplus premium.....	26, 693. 35
Total.....	697, 279. 36

It is explained that this total will be very substantially increased when all additional premiums due the fund as of November 15, 1915, as a result of very heavy underestimates of pay rolls, are collected. Based on a large number of pay roll reports that have been recently completed by the employers and returned to the commission, the actual pay-roll total would be increased approximately 44 per cent over the estimated pay roll.

"Most of the 209 rates which have been increased can be substantially reduced and that the 253 rates which have been reduced as of January 1, 1916, can be still further reduced."

A tentative "statement of the conditions of the employers' fund as a whole" as of November 15, 1915, issued by the commission, is as follows:

ASSETS.	
Premiums received.....	\$6, 064, 145. 81
Premiums in course of collection.....	453, 237. 79
Additional premium factor.....	159, 607. 22
Interest from premium deposits.....	182, 408. 26
Total.....	6, 859, 399. 08

LIABILITIES.	
Warrants issued.....	3, 695, 885. 60
Reserve for losses (to bring all claims to full maturity).....	1, 875, 410. 58
Catastrophe reserve developed by premium of State risks.....	346, 003. 48
(a) Interest received from premium deposits.....	182, 408. 26
(b) 5 per cent premium from self-insurers.....	142, 174. 27
Unearned premiums.....	590, 823. 54
Net surplus premiums.....	26, 693. 35
Total.....	6, 859, 399. 08

This statement, it is explained, involves the factor of underestimated pay rolls as applied to both earned and unearned premiums. It shows an unearned premium total of \$590,823.54 and it is suggested that when all additional premiums due the fund as of November 15,

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1915, have been collected, the total unearned premiums will be near \$1,000,000.

The tentative statement of unearned premiums versus loss cost as of November 15, 1915, covering employers' fund only, shows gross earned premiums amounting to \$5,943,993.01; awards made, including paid and deferred, amounting to \$5,018,040.56;¹ pending claims, including unreported, amounting to \$553,255.62; total losses amounting to \$5,571,296.18; surplus of \$372,696.83, and gross loss ratio of 93.7 per cent. The net earned premiums versus loss cost, showing a net loss ratio, is set forth in the following table:

STATEMENT OF NET EARNED PREMIUM VERSUS NET LOSS COST AS OF NOV. 15, 1915
(EMPLOYERS' FUND ONLY).

Schedule.	Gross earned premium.	Catastrophe reserve.	Net earned premium.	Total losses.	Surplus.	Loss ratio.
Bakers.....	\$53,649.87	\$3,119.52	\$50,530.35	\$49,021.91	\$908.54	98.2
Chemical—paint and drug.....	26,417.12	1,602.45	24,814.67	26,862.22	- 2,047.55	108.3
Coach (carriage and wagon).....	149,189.39	8,383.52	140,805.87	142,068.93	- 1,263.06	100.9
Coal mines.....	442,756.43	22,917.03	419,839.40	498,387.15	- 78,547.75	118.7
Contractors.....	1,105,806.57	61,255.84	1,044,550.73	920,060.22	124,490.51	88.1
Electric.....	117,380.45	6,881.56	110,498.89	87,619.35	22,879.54	79.3
Leather (shoes).....	63,848.01	3,820.27	60,027.74	45,599.94	14,427.80	76.0
Lumber.....	187,926.75	11,231.98	176,694.77	200,553.15	- 23,858.38	113.5
Meat.....	54,350.49	2,659.42	51,691.07	36,594.58	15,096.49	70.8
Metal.....	1,744,527.12	105,152.37	1,639,374.75	1,638,045.56	1,329.19	99.9
Milling.....	34,464.70	2,104.25	32,360.45	41,062.30	- 8,701.85	126.9
Mining (not coal).....	19,755.03	1,171.57	18,583.46	21,518.76	- 2,935.30	115.8
Miscellaneous.....	427,853.29	24,440.86	403,412.43	456,304.26	- 52,891.83	113.1
Oils.....	68,122.32	3,902.48	64,219.84	70,883.26	- 6,663.42	110.4
Ore and blast furnace.....	125,555.94	8,570.05	116,985.89	137,909.36	- 20,923.47	117.9
Paper.....	120,996.14	7,884.88	113,111.26	129,599.33	- 16,488.07	114.6
Pottery (glass).....	221,997.97	13,000.47	208,997.50	248,474.82	- 39,477.32	118.9
Printing.....	67,560.82	3,997.32	63,563.50	61,870.39	1,693.11	97.3
Rubber.....	107,255.28	6,240.24	101,015.04	95,471.77	5,543.27	94.5
Stevedore.....	22,548.15	1,254.61	21,293.54	13,715.89	7,577.65	64.4
Stone.....	138,951.39	8,787.45	130,163.94	139,820.73	- 9,656.79	107.4
Textile.....	68,393.80	4,086.21	64,307.59	45,253.34	19,054.25	70.4
Tobacco.....	14,240.94	807.60	13,433.34	3,546.22	9,887.12	26.4
Vessel.....	11,042.16	581.36	10,460.80	15,859.68	- 5,398.88	151.6
Warehouse.....	364,818.42	20,972.45	343,845.97	293,684.51	50,161.46	85.4
Wood.....	152,367.35	9,252.66	143,114.69	131,868.12	11,246.57	92.1
Abstract.....	32,217.11	1,925.06	30,292.05	19,040.53	11,251.52	62.9
	5,943,993.01	346,003.48	5,597,989.53	5,571,296.18	26,693.35	99.5

In this table the total catastrophe reserve is that accruing from premiums on State risks. To this must be added interest received on premium deposits, amounting to \$182,408.26; self insurance 5 per cent catastrophe reserve, amounting to \$142,174.27; making a total catastrophe reserve of \$670,586.01. The net surplus is the source from which liability insurance companies would declare dividends to stockholders. The reduction of rates from time to time has been based on this surplus. The statement of May 15, 1915, showed a net surplus premium of \$284,206.06, and as of July 1, 1915, the commission made its fifth reduction of rates.

¹Including awards made to the middle of December, 1915, on all accidents occurring on or before Nov. 15, 1915.

OREGON.¹

The first annual report of the Industrial Accident Commission is a pamphlet of 44 pages setting forth the operations of the workmen's compensation law for the 12 months ending June 30, 1915. This law creates an industrial fund from which the benefits of the act are provided for workmen who are injured by accidents arising out of and in the course of their employment. These benefits have been paid promptly, without litigation of consequence and irrespective of the question of negligence or fault. The fund is made up by payments from the employer, the workman, and the State. During the first year the employee paid one-half of 1 per cent of his wages but not less than 25 cents per month, while the employer paid six times as much and the State contributed a subsidy. At present the employer pays a percentage of his pay roll, which varies in rate according to the hazard of his operations. The workman's payment is 1 cent for each day or part of day employed, his employer paying the assessment and deducting it from his wage. The State appropriates one-seventh of the total payments of employers and workmen. While the law is optional in character employers and workmen are presumed to have elected to become subject to the act where they fail to serve written notice of rejection. The provisions of the law apply to occupations named in the act, embracing factories, mills, and workshops where power-driven machinery is used, construction work, and certain other occupations. Employments not subject to the act may secure its protection and benefits by application, the commission being authorized to fix the rates therefor.

While many employers at first filed formal notice rejecting the provisions of the law, a large number later decided to come under its protection, and when the law became effective July 1, 1914, employers to the number of 4,384 were contributors to the State industrial accident fund. During the year the number increased to 5,088, and it is estimated that between 80 and 85 per cent of the employers and workmen subject to the law operated under its provisions during the first 12 months. During the year the compensation benefits paid out or set aside amounted to \$370,200.46. The administrative expense amounted to \$49,528.05, making the total benefits and expense \$419,728.51, the administrative expense being 11.8 per cent of this amount.

¹ State of Oregon: First annual report of the State Industrial Accident Commission for the year ending June 30, 1915, including also the period of organization from Nov. 5, 1913, to June 30, 1914. Workmen's compensation law. Salem, 1915, 44 pp.

The following is a recapitulation of the financial statement of the State industrial accident fund at the close of business June 30, 1915.

RECEIPTS.

Contributed by the State.....	\$90,345.22	
Employers' contributions.....	450,932.49	
Workmen's contributions.....	78,754.33	
		<u>\$620,032.04</u>

DISBURSEMENTS.

Set aside in reserve to guarantee pensions. . . .	174,843.99	
Compensation for time loss.....	121,638.27	
First aid to injured workmen.....	61,438.70	
Burial expenses.....	5,219.23	
Pensions paid.....	7,060.27	
Cost of administration to date.....	¹ 70,129.22	
		<u>440,329.68</u>
Balance.....		179,702.36

As already suggested, the law provides for a payment to the industrial accident fund by the State of an amount equal to one-seventh of the total payment made by employers and employees. From this fund are made all payments authorized by the act, including the cost of administration. The item of \$90,345.22 appearing above includes the original appropriation of \$50,000 made by the legislature and \$40,345.22 as the State's contribution from July 1, 1914, to December 31, 1914. On June 30, 1915, the secretary of state credited to the fund \$40,910.38 to cover the State's contribution for the preceding six months. Therefore the contribution made by the State for the year under consideration would be the total of \$40,345.22 and \$40,910.38, or \$81,245.60. The report states, however, that while the payments for compensation benefits as shown in the above statement represent a period of one year, the receipts from employers and workmen were for 11 months only.

The fact that during the period from November 5, 1913, to June 30, 1915, the insurance features had been operative for but 12 months, suggests several methods of stating the cost of administration. The total expense during the entire period, amounting to \$70,129.22, including original organization expense and the cost of permanent adjustment, shows a ratio of expense to receipts of 10.6 per cent.² For the year ending June 30, 1915, the administrative expense rep-

¹ This figure represents the cost of administration from Nov. 5, 1913, to June 30, 1915. As noted elsewhere the administrative cost for the year ending June 30, 1915, was \$49,528.05.

² If this is based on the receipts for 11 months as shown in the recapitulation of the financial statement the ratio of expense to receipts is 11.3 per cent, instead of 10.6.

represented 8.69 per cent¹ of the moneys handled by the commission during that period. Using still another method of stating the cost of administration, it required during the year ending June 30, 1915, \$1.337 to carry \$1 in benefits to injured workmen.

Where workmen are permanently partially disabled, as in the loss of an arm or foot, the law provides a monthly payment of \$25 for periods of time which vary according to the severity of the injury. The awards range from six months at \$25 per month for the loss of a little finger to 96 months for the loss of an arm at or above the elbow. Where the loss of fingers, toes, or an eye is involved, the workman has the option of taking the sum awarded in installments of \$25 per month or a single payment somewhat less than the total of the installment payments. During the year 66 per cent chose to take payment in a lump sum. While authority is given the commission in its discretion to make lump-sum payments under certain conditions in fatal cases, no applications for such awards were made during the first 12 months.

The Oregon law authorizes the commission to provide medical and surgical attendance, transportation, and hospital accommodations for injured workmen, the expenditure in any one case being limited to \$250. The charges of surgeons for their services are made in accordance with a fee schedule which was adopted by the commission after securing the views of physicians in various parts of the State and conferring with a committee from the State Medical Society. Of the total number of claims filed during the year there were 12 cases in which the cost of treatment would have exceeded the limitation of \$250. The total cost of medical, surgical, hospital, and similar service during the year was \$61,438.70, or 16.59 per cent of compensation cost.

During the year but four appeals were made from decisions of the commission. In only a few instances did workmen ignore the compensation act and bring suit against their employers, and the report states that this litigation was generally unsuccessful.

Reserves are set aside in all permanent partial disability cases where the payments extend over two years. Where workmen are disabled for short periods compensation is awarded and paid as promptly as possible after the workman has resumed his employment. There is no waiting period. In cases of serious injury extending over

¹ This is not apparent from the above recapitulation of the financial statement, since the receipts there indicated, as already shown, cover a period of only 11 months. Based on the estimated receipts, \$659,076.67, indicated in the last table, the administrative expense represented 7.5 per cent of moneys handled by the commission. Based on the receipts from employers and workmen as shown in the recapitulation and taking the amount received from the State for the 12 months ending June 30, 1915, namely, \$81,245.60, the ratio of expense to receipts is 8.11 per cent.

one or more months compensation is paid at the expiration of each month.

During the year a total of 4,546 claims were reported to the commission. The following table shows the disposition of these claims:

CLAIMS REPORTED AND DISPOSED OF FOR THE YEAR ENDING JUNE 30, 1915.

Claims.	Number.	Per cent.
Received.		
Nonfatal accidents reported.....	4,475	98.44
Fatal accidents reported.....	71	1.56
Total.....	4,546	100.00
Disposition.		
Final settlement.....	2,714	59.70
Suspensions (no claim for compensation received).....	237	5.21
No time loss but first aid paid.....	876	19.27
Claims in process of adjustment.....	324	7.13
Rejection for cause.....	155	3.41
Settled by third party.....	1	.02
Monthly payments continued July 1, 1915 (disability still existing).....	152	3.35
Awards made and amounts set aside:		
Permanent partial.....	15	.33
Permanent total.....	1	.02
Fatal cases.....	27	.59
Fatal cases:		
Finaled by remarriage.....	1	.02
Finaled by expiration.....	1	.02
In process of adjustment.....	19	.42
Suspended (no record of dependency).....	20	.44
Rejected.....	3	.07
Total.....	4,546	100.00

Of the 155 claims rejected by the commission 32 of the claimants were not injured in the course of their employment, 31 furnished insufficient evidence of injury by accident, 23 were not disabled, 21 suffered from disease, 16 were not subject to the act, the employers of 8 workmen had rejected the law, two claimants were employers, in two cases the injury had been received while fighting, one claimant had personally rejected the act, and one claim was rejected because the workman had been injured while in the service of an employer in another State. The remaining 18 cases were trivial—chapped hands, lime and cement poisoning, and infection not resulting from an accident. In the case of hernia, the commission ruled that the evidence must show that hernia resulted or developed through accident and had not existed prior to the accident.

Of the 4,546 claims reported to the board during the year, 2,793 were definitely passed upon, for which compensation was paid. Of these 60 were fatal, 110 were permanent partial disabilities, 1 was permanent total disability, and 2,622 were temporary disabilities. The total receiving compensation includes cases in which the claimant lost time for as brief a period as one-half day. The summary of injuries, awards, and first-aid cost is presented in the table following.

SUMMARY OF INJURIES, AWARDS, AND FIRST-AID COST, BY NATURE OF INJURY,
FOR YEAR ENDING JUNE 30, 1915.

Kind of injury.	Num- ber of cases.	Amount of awards.				First- aid cost.	Total benefits.	Average benefits per case.	Per cent of total ben- efits.
		Pension reserves.	Burial (57cases).	Disabli- ty.	Time loss.				
Fatal.....	60	\$156,713.93	\$5,419.23	.....	.....	\$677.70	\$162,810.86	\$2,713.51	49.7
Permanent total.....	1	7,346.31	.....	.....	.....	250.00	7,596.31	7,596.31	2.3
Permanent partial.....	110	.....	.....	\$54,811.20	\$3,998.02	3,978.00	62,787.22	570.79	19.1
Temporary.....	2,622	.....	.....	.....	75,130.73	19,511.37	94,642.10	36.09	28.9
Total.....	2,793	164,060.24	5,419.23	54,811.20	79,128.75	24,417.07	1327,836.49	1,173.77	100.0

¹ This total does not include 876 cases in which no time was lost but which involved a first-aid cost of \$1,607.20; nor does it include \$35,841.52 paid on account of hospital contracts. Adding these two items a total of \$365,285.21 is obtained, which is \$4,915.25 less than the total compensation paid, namely, \$370,200.46. The report does not explain this difference.

Of the 2,732 nonfatal accidents 110 classified as permanent partial disabilities and 2,622 classified as temporary disabilities are shown according to the member of the body affected and the nature of the injury. Without giving the details of these tables, the number of cases, average disability award, average number of work days lost, average time award, number of first-aid cases in which first-aid bills were paid by the commission, and the average first-aid cost are indicated in the following table:

CASES, AWARDS, DAYS LOST, AND FIRST AID IN PERMANENT PARTIAL AND TEM-
PORARY DISABILITY CASES.

Nature of disability.	Number of cases.	Average disability award.	Average number of work days lost.	Average time award.	Number of first- aid cases.	Average first-aid cost.
Permanent partial.....	110	\$498.28	47.5	\$36.35	52	\$76.50
Temporary disability.....	2,622	.....	17.1	28.65	1,057	18.46
Total.....	2,732	498.28	18.4	25.30	1,109	21.16

Of the 2,622 temporary disabilities, 814, or 31 per cent, lasted one week or less and would have been eliminated by a one week waiting period; 1,497, or 57 per cent, lasted two weeks or less and would have been eliminated by a two weeks' waiting period. In addition, the longer term disabilities would have been reduced, for the purpose of computing compensation, by one or two weeks had there been a one or two weeks' waiting period. The compensation for temporary disabilities would have been reduced approximately \$21,000 with a one week waiting period, and \$34,600 with a two weeks' waiting period. The length of disability by weeks for fatal, permanent partial, and temporary disabilities is shown in the following table, one permanent total disability case being omitted.

DURATION OF FATAL, PERMANENT PARTIAL, AND TEMPORARY DISABILITIES FOR THE YEAR ENDING JUNE 30, 1915.

Duration of disability.	Permanent partial.		Temporary.		Fatal (disability before death).		Per cent of all disabilities.
	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	
No time loss.....	4	3.7	.....	.....	55	91.6	2.1
One week or less.....	1	.9	814	31.0	2	3.3	29.3
Over 1 to 2 weeks.....	4	3.7	683	26.0	.....	.....	24.6
Over 2 to 4 weeks.....	16	14.5	599	22.8	.....	.....	22.0
Over 4 to 8 weeks.....	38	34.5	357	13.6	2	3.3	14.2
Over 8 to 13 weeks.....	35	31.8	107	4.1	1	1.7	5.1
Over 13 to 26 weeks.....	12	10.9	50	1.9	.....	.....	2.2
Over 26 weeks.....	.....	.....	12	.5	.....	.....	.4
Total.....	110	100.0	2,622	100.0	60	100.0	100.0

In the classification of accidents according to industry, 1,378, or 49.3 per cent, occurred in the lumber industry, including logging and logging railroads, and lumber manufacture and the manufacture of lumber products. Five hundred and two, or 18 per cent, were due to miscellaneous construction work. The accident frequency is indicated in the following table.

Fatals per 1,000 full-time workers.....	2.86
Permanent totals per 1,000 full-time workers.....	.05
Permanent partials per 1,000 full-time workers.....	5.24
Temporary disabilities per 1,000 full-time workers.....	124.85
Total accidents per 1,000 full-time workers.....	133.00

One hundred and sixty-two, or 5.8 per cent, of the injuries passed upon were aggravated by infection. The cost of these injuries is here indicated:

Number of injuries which were aggravated by infection.....	162
Compensation awarded (including reserve set aside in one fatal case)....	\$11,911.39
First-aid cost to the commission in 71 cases.....	2,051.05
Burial in one fatal case.....	100.00
Total cost to the commission.....	14,062.44

The report shows that mechanical accidents were the most costly, the average for the 661 thus classified being \$203.80, while the average cost of 2,132 nonmechanical accidents was \$79.13. Although the nonmechanical accidents were greater in number the mechanical accidents were decidedly more severe. The following table shows the classification of accidents according to cause, presenting the relative importance as indicated by the cost of compensation. In fatal cases the cost of the average fatal case has been used in each instance, as the cost of individual cases varies too greatly to be of any value as an index of severity. First-aid expense is not included in the cost.

CLASSIFICATION OF ACCIDENTS ACCORDING TO CAUSE, SHOWING RELATIVE IMPORTANCE AS INDICATED BY THE COST OF COMPENSATION.

Cause.	Number of accidents.			Cost of compensation.	Per cent of total cost.
	Fatal.	Nonfatal.	Total.		
Mechanical accidents.					
Boilers and steam pipes.....	1	9	10	\$2,996.65	0.99
Prime movers (engines and motors).....		21	21	1,561.31	.51
Transmission apparatus.....	2	64	66	18,411.43	6.17
Saws.....	1	136	137	21,596.70	7.12
Working machinery (other than saws).....	2	109	111	13,691.37	4.51
Hoisting and conveying apparatus.....	14	247	261	56,078.41	18.48
Power vehicles.....	6	37	43	20,052.40	6.61
Miscellaneous mechanical accidents.....		12	12	321.01	.11
Total, mechanical accidents.....	26	635	661	134,709.28	44.50
Nonmechanical accidents.					
Explosives, fires, corrosive substances, electricity.....	4	71	75	14,539.78	4.79
Falling objects.....	9	396	405	35,426.18	11.68
Falls of persons.....	6	371	377	32,438.29	10.69
Hand tools.....		393	393	19,166.07	6.32
Handling materials and objects.....	1	303	304	9,795.72	3.25
Rolling objects.....	5	82	87	17,368.73	5.72
Striking against or being struck by objects; stepping on sharp objects.....		214	214	5,633.35	1.86
Drowning.....	8		8	21,617.76	7.12
Miscellaneous nonmechanical accidents.....	1	268	269	12,724.26	4.19
Total, nonmechanical accidents.....	34	2,098	2,132	168,710.14	55.60
Total, all accidents.....	60	2,733	2,793	303,419.42	100.00

Hospital fees were paid by the injured workmen in 1,520, or 57 per cent, of the 2,675 cases in which information was available. The fees amounted to \$1 per month in 1,276, or 47.7 per cent, of the cases and the average paid per case reported was 97 cents per month. These fees are in addition to the regular contributions which all employees make under the compensation act. In all except one instance it will be observed the hospital fees are in excess of these regular legal contributions. In some cases they were probably equal to half of the contributions paid by the employer under the law as in effect during the period covered by the report. The following table indicates the distribution of these payments:

MONTHLY HOSPITAL FEES PAID BY INJURED WORKMEN.

Dues.	Number of cases.	Per cent.	Dues.	Number of cases.	Per cent.
25 cents.....	1	0.04	90 cents.....	6	0.22
30 cents.....	2	.07	\$1.....	1,276	47.71
35 cents.....	1	.04	\$1.25.....	14	.52
50 cents.....	49	1.83	\$1.50.....	14	.52
65 cents.....	22	.82	\$2.....	4	.15
72 cents.....	1	.04	\$2.75.....	1	.04
75 cents.....	123	4.60	\$3.....	1	.04
80 cents.....	2	.07	No dues.....	1,155	43.18
85 cents.....	2	.07			
87 cents.....	1	.04	Total.....	2,675	100.00

The Oregon law has adopted in general a pension system of compensation. This is essentially different from the system which bases awards on a percentage of wage and which is largely in use in other States. A pure premium system is intended to pay compensation from the standpoint of public policy. The system based on a percentage of wage is intended to remunerate the injured or his dependents in rough proportion to the economic loss suffered. The pensions awarded under the Oregon law to dependents in fatal cases are, roughly speaking, as follows: \$30 per month to surviving widows or invalid widowers; \$6 per month to children under 16; 50 per cent of the average monthly support to actual dependents or single workmen, but not to exceed \$30 per month.

Awards for temporary disabilities partake of both the pension system and that based on a percentage of wage. The pensions granted vary with the marital condition and the number of children under 16 years. However, the law provides that in a vast majority of cases—disabilities during the first six months—this pension may be increased one-half provided it does not exceed 60 per cent of the wage. This means that in effect the Oregon law grants to the injured person 60 per cent of his wage with the following principal minimum and maximum limitations:

MINIMUM AND MAXIMUM AMOUNTS OF PENSION FOR TEMPORARY DISABILITY.

Marital condition and number of children under 16.	Minimum pension.	Maximum pension.
Unmarried.....	\$30.00	\$45.00
Married and no children.....	35.00	52.50
Married and 1 child.....	41.00	61.50
Married and 2 children.....	47.00	70.50
Married and 3 children.....	50.00	75.00

It will be seen that the minimum limitations are high, in some cases \$50 per month. This, coupled with the fact that Oregon has no waiting period and that the wage per month is estimated on the basis of 26 days, or 312 days per year, raises the aggregate Oregon awards for temporary disabilities above the level of those granted in other States. The wage loss for 2,622 temporary disability cases during the year amounted to \$125,287.63. The compensation paid to cover this loss was \$75,130.73, or 60 per cent of the wage loss. Under the Washington law, in which the system of awards is the same as in Oregon with some decrease in pensions, the percentage of wage loss paid in compensation is 47.6 per cent. A comparison with the percentage of wage loss that according to estimates would have been granted in the Oregon cases under the schedule of a few typical laws in other States may be useful, and the following is quoted from the report:

One type of law, adopted in a number of States, pays compensation on the basis of 50 per cent of the average wage, with a maximum limit of \$10 per week, a minimum limit of \$5 per week, and a two weeks' waiting period. Such a schedule applied to the Oregon cases would have paid 25 per cent of the wage loss.

A more liberal type of law is that of New York, in which the awards are based on 66 $\frac{2}{3}$ per cent of the average wage, with a maximum limit of \$15 per week, a minimum limit of \$5 per week, or full wages and a two weeks' waiting period. Such a schedule applied to the Oregon cases would have paid 34 per cent of the wage loss.

One of the most liberal of the laws that pays a percentage of the wage is that of Ohio. The awards are based on 66 $\frac{2}{3}$ per cent of the average wage, with a maximum limit of \$12 per week, a minimum limit of \$5 per week, or full wages and a one week waiting period. Such a schedule applied to the Oregon cases would have paid 42 per cent of the wage loss.

In these last three typical cases the average weekly wage is taken to be based on 300 work days per year. Some of the facts to be noticed in the above comparison are:

The awards for temporary disability granted under the system of pensions in Washington and Oregon result in liberal compensation as compared with the awards granted in States in which compensation is based on a percentage of wage and in which waiting periods exist. The percentage mentioned in the law is not always a true index to the percentage of wage loss which is paid to injured workers. The standard of 66 $\frac{2}{3}$ per cent of wage loss which has been set by some federations and associations has not as yet been reached in any State.

PHYSICAL EXAMINATION OF WAGE EARNERS IN OHIO.

A recent report by the Department of Investigation and Statistics of the Industrial Commission of Ohio presents an account of an investigation of the results of physical examination of applicants for work and of employees at work in certain establishments in Ohio during the year 1914.¹

According to this report "the movement for physical examination of applicants for work and of employees has grown rapidly in Ohio." Thus, prior to April of 1914, excluding railroads and street railways, only 4 establishments required applicants for work to undergo a physical examination. During that year, however, 11 establishments began physical examinations of applicants for work and of employees; 14 began the physical examination of applicants for work only, and 1 establishment the examination of employees. In the course of collecting data for this report, it was found that in the first eight months of 1915 six establishments began the physical examination both of applicants for work and of employees, 4

¹ Physical Examination of Wage Earners in Ohio in 1914. Columbus, 1915. 29 pp. (Bulletin of the Industrial Commission of Ohio, Vol. II, No. 6; Department of Investigation and Statistics, Report No. 18.)

others began the physical examination of applicants for work alone and 2 others of employees alone. There were, therefore, in Ohio at the time of the investigation 42 establishments, normally employing approximately 68,500 persons, which required physical examination of applicants for work or of employees or of both.

The distribution by industries of the establishments which were covered by the investigation was as follows:

Industry.	Number of establishments reporting examination of—	
	Applicants for work.	Employees at work.
Steel works and rolling mills.....	13	5
Foundry and machine shop products.....	4	1
Rubber goods manufacture.....	4	3
Telegraph and telephone companies.....	2	1
Wire works.....	1	1
Electrical machinery and supplies.....	1	1
All others, including cash registers, calculating machines, cutlery and tools, transportation by water, maintenance of buildings and office work, and clothing manufacture.....	4	1
Total.....	29	12

Complete records are not available for all these establishments. Twenty-six establishments, which required applicants to undergo a physical examination and which kept records, examined 23,118 persons during 1914, and rejected 1,040 because of physical inefficiency. Six establishments, which required employees to undergo a physical examination and which kept records, examined 8,054 during 1914 and reported 791 physically unfit for the work at the time of the examination, but discharged only 118 as a result of the examination. The remaining 673 were allowed to remain on the work on which they were engaged, but were given advice concerning treatment or were furnished treatment, or were transferred to work for which they were better fitted.

The purposes of the physical examination of workmen were declared to be (1) to enable the employer to select men physically fit for the work he wants them to do, (2) to determine their physical condition so as to avoid unjust claims for injuries, (3) to adjust the employee to the work for which he may be physically best suited, and (4) to maintain the health of employees by preventing the introduction of communicable diseases, by advising and educating industrial workers to care for their physical well being, and to reduce the hazard to the individual employee and his fellow workmen arising from physical defects.

The investigation showed that these physical examinations varied greatly in the various establishments, both as to the character of the

person by whom they were conducted and as to the degree of thoroughness observed. The report does not relate the results of the examinations to the degree of thoroughness in the methods employed, nor does it show results by establishments or industries. In 11 of the 29 establishments male applicants for work were examined physically by graduate physicians employed on full time; in 8 establishments practicing physicians were retained on a fee basis; in 5 establishments graduate trained nurses made the examinations; in 4 establishments employment officers who were not medical graduates made the examination, and in 1 establishment a practicing physician, who took charge of the general medical work of the establishment, was retained on annual salary. In the 12 establishments which examined employees at work, graduate physicians were employed to do the work. As to degree of thoroughness, it is noted that the time of each examination ranged from about 5 to 30 minutes.

It is pointed out that as a general rule "the examinations were not conducted along exact lines of scientific investigation, but, instead, each type of examination was arranged to point out the defects it seemed important to disclose in relation to the particular requirements of the establishment or the ideas of those in charge."

The results of the examinations, both of applicants for work and of employees at work, may be summarized in the following table:

CAUSES OF REJECTIONS OF APPLICANTS FOR WORK AND CAUSES RENDERING EMPLOYEES AT WORK UNFIT FOR TASKS AT WHICH ENGAGED AT TIME OF EXAMINATION.

Cause.	Applicants rejected.			Employees found unfit for work at which engaged.		
	Male.	Female.	Total.	Male.	Female.	Total.
General diseases:						
Syphilis.....	20	.....	20	11	.....	11
Tuberculosis.....	21	.....	21	10	2	12
Other general diseases.....	15	.....	15	15	1	16
Total.....	56	.....	56	36	3	39
Circulatory system:						
Organic disease of the heart.....	98	4	102	26	.....	26
Organic disease of the heart, with complications.....	58	.....	58	.....	.....	.....
Other diseases of the circulatory system.....	10	.....	10	4	.....	4
Total.....	166	4	170	30	.....	30
Nervous system, diseases of.....	14	.....	14	3	.....	3
Eye:						
Impaired vision.....	125	77	202	249	71	320
Trachoma.....	10	.....	10	3	.....	3
Other diseases of the eye.....	14	.....	14	6	.....	6
Total.....	149	77	226	258	71	329
Ear (impaired hearing).....	6	1	7	10	5	15
Mouth and throat, diseases of.....	3	2	5	.....	.....	.....
Chest (poor chest).....	19	.....	19	2	.....	2

CAUSES OF REJECTIONS OF APPLICANTS FOR WORK AND CAUSES RENDERING EMPLOYEES AT WORK UNFIT FOR TASKS AT WHICH ENGAGED AT TIME OF EXAMINATION—Concluded.

Cause.	Applicants rejected.			Employees found unfit for work at which engaged.		
	Male.	Female.	Total.	Male.	Female.	Total.
Hernia:						
Inguinal hernia.....	230	.....	230	218	.....	218
Hernia, with complications.....	30	.....	30	46	.....	46
Other forms of hernia.....	7	.....	7	8	.....	8
Total.....	267	.....	267	272	.....	272
Genito-urinary:						
Gonorrhea.....	77	.....	77	11	3	14
Other genito-urinary diseases.....	9	1	10	3	.....	3
Total.....	86	1	87	14	3	17
Varicose veins.....	20	.....	20	14	.....	14
Glands, diseases of.....	6	4	10	.....	.....	.....
Skin, diseases of.....	18	1	19	.....	.....	.....
Abnormal growths (tumors).....	3	.....	3	.....	.....	.....
Infections.....	3	.....	3	.....	.....	.....
Occupational diseases:						
Benzine poisoning.....	1	.....	1	.....	.....	.....
Lead poisoning.....	2	.....	2	.....	.....	.....
Total.....	3	.....	3	.....	.....	.....
Convalescent.....	31	.....	31	.....	.....	.....
Deformities or maimed conditions.....	54	.....	54	61	.....	61
Not specified.....	34	12	46	8	1	9
Grand total.....	938	102	1,040	708	83	791

SANITARY STANDARDS FOR THE FELT HATTING INDUSTRY IN NEW JERSEY.¹

In an effort to safeguard the health of New Jersey's half million workers, and in the hope of promoting a spirit of cooperation among those engaged in manufacturing processes offering sanitary problems of peculiar difficulty, the New Jersey Department of Labor has in preparation a series of bulletins intended not only to prove helpful in establishing the claims to protection of certain workers who have been too long sacrificed to supposedly "necessary hazards," but also to enable employers to compare their methods with the latest hygienic standards now prevailing in their respective trades. One of these bulletins, issued in July, 1915, is an illustrated pamphlet of 94 pages which sets forth in detail all phases of the felt hatting industry, and presents the sanitary standards to be maintained in order to render employment reasonably safe and free from health-destructive menaces.

The report is based largely upon an investigation of conditions existing, experiments tried, and results achieved in hat factories of the Orange Valley and Newark, N. J., Danbury, Conn., Philadel-

¹ Sanitary Standards for the Felt Hatting Industry, published by the Department of Labor, State of New Jersey. Trenton, 1915. Illustrated. 94 pp.

phia, Pa., and Fall River, Mass., supplemented by other facts gathered by experts of the department.

Following a chapter describing the felting of fur, the report presents in order a brief description of each process employed in fur cutting from the time the skins are received to the time they are sacked and stored ready for the hat maker. After being dampened and opened, the skins are "tumbled" or "carded" (an extremely dusty process) to smooth out the little bunches of matted hair, and are then fed into the "plucking" machine to be rid of the excess of hair found in all pelts. In the "carrotting" process which follows, the worker encounters the first great hazard connected with the hatting industry, namely, mercurial poisoning. The carrot, so called from the carrot-yellow color of the treated skins which have been subjected to heat, is a diluted solution of nitric acid and mercury applied by hand to the fur side of the skin for the purpose of opening up the scales of the fur fiber in order to facilitate their tendency to interlock, which is the secret of the felting process. Machine carrotting is even more dangerous than that done by hand, because the machines as a rule are operated without mechanical exhaust ventilation and the brushes which apply the liquid throw off a fine spray of mercury, much of which the worker is compelled to inhale. The skins are then dried. Here again the fumes are extremely dangerous and exhaust ventilation or a powerful natural draft is imperative. Brushing the felt to smooth out the matted hair so that the fur will later come from the cutter with each filament separate generates a highly dangerous dust heavily charged with crystallized nitrate of mercury, and in the subsequent cutting process the workers are liable to accident resulting in loss of the ends of fingers or even an entire hand. The sorting of fur is done by girls and women and the sacking and storage by men, both occupations being highly injurious because of exposure to a mercury-impregnated atmosphere.

One of the most obstinate problems in the fur-cutting trade is stated to be found in the blowing room where the marketable hatters' fur is reclaimed from the sweepings and refuse destined for the fertilizer plants. Not only floating fur but great quantities of mercurialized dust are thrown into the air of the workroom during the process. In some factories the danger to health resulting from inhaling this dust has been largely eliminated by the installation of machines equipped with some type of mechanical exhaust ventilation, illustrations of which are presented in the report.

The department of labor presents the following summary of sanitary standards established for the purpose of making fur cutting reasonably safe and sanitary:

Inclosure, and standard exhaust ventilation on tumbling drums.
Standard exhaust ventilation for the fur-plucking machine.

Mixing the carrot outside the shop.

Storing the carrot in ventilated chambers.

Rubber gloves and impervious aprons for the carrotter.

A drained bench of impervious material slanting away from the carrotter.

Ventilating hood with efficient exhaust above the carrotting table for both hand and machine work.

Efficient draft to carry off all fumes from drying ovens.

Standard exhaust ventilation on the brushing machines.

Exhaust ventilation on the cutting machines.

Mechanical exhaust ventilation on all blowing machines.

Removal of steam by means of ventilating hoods from all boiling tanks in the treatment of "roundings."

Mechanical exhaust ventilation on all tearing machines, teasing blowers, choppers, and grinders.

No raising of the temperature of the workroom above 60 degrees by means of artificial heat.

Wearing of overalls and head coverings.

Abundant natural or mechanical ventilation in the storeroom for sacked fur, and wherever "white-carrotted" skins are drying.

Daily gathering up of all waste, vacuum cleaning, or wet sweeping of the whole shop at noon and after work hours daily.

Separate washing facilities for both men and women, with hot and cold water; modern toilet accommodations; and pure, cool drinking water, preferably bubbling fountains.

Separate lunch rooms outside of the rooms where mercury and carroted fur are handled.

Warning notices (such as this one posted in certain English shops) which would call the attention of workers to the need for cleanliness and personal hygiene:

Fur cutters are warned of the danger of mercurial poisoning of which the principal symptoms are soreness of the gums, offensive breath, increase in the amount of spittle, and trembling of the fingers.

Workers are warned of the danger arising from the chewing of tobacco, and of eating food with unwashed hands.

Mercury has a tendency to destroy the teeth, and this can be best obviated by the use of a toothbrush once every day.

The processes of hat manufacture are carried on in two general departments, namely, the "back shop" and the "front shop," in each of which are found health hazards peculiar to the work performed. In the back shop the various kinds of graded fur, which have been purchased from the cutters but which must be refined before being fit for hat making, are mixed by hand,¹ subjecting the mixer to extreme danger because of the cloud of poisonous fur and dust thrown into the air, and then in the blowing machine cleaned of every bit of foreign matter, after which the mixture is weighed out in the quantity required for one hat. This mixed fur being fed into a machine is drawn by powerful fan suction and deposited on a rapidly revolving slightly dampened copper cone where, under the

¹ It is stated that one firm handling the finest grades of fur mixture is now using for this purpose a machine which does the work as satisfactorily and more cheaply than hand labor and keeps the room free from dust and fur.

eyes of the "coner," it assumes the shape of a huge fool's cap. This is removed and hardened and then passed on for the so-called "wet" processes, performed in that portion of the back shop called the "plank shop." After being dried, brim stiffened, dyed and finally blocked, the hat is ready for the "pouncer" who removes all hair which, during the sizing operation, worked through the felt and was left protruding from the surface. In the front shop the hat undergoes the finishing processes, including steam blocking, crown and brim ironing, surface finishing, curling (in the case of derbies), trimming, and flanging by which the curl is set and the desired curve given to the brim.

In most of the above processes, to a much less degree however in the front shop than in the back shop, the chief dangers to health which are noted are the mercurialized-dust hazard and the steam hazard, both of which result from essentially necessary factors in the making of hats. In many of the processes performed in the back shop the workers are constantly exposed to poisonous dust, although in some cases this is minimized by properly constructed machinery, and it is stated that no single department ordinarily contains more serious health hazards (both mercury poisoning and consumption) than the blowing room, owing to the quantity of carroted fur and dust thrown out by the machine while in operation.

Some idea of the dangers of the work in the back shop may be gained from the following excerpt from the report:

To those outside the trade no adequate conception of the discomforts of the typical plank shop can be conveyed by the mere statement that—from starting to blocking—the makers work over kettles of water kept at the boiling point. For the greater part of the year the average sizing and dye rooms are filled with an impenetrable fog. The starters at the octagonal battery (their shoulders almost touching), may each one be conscious of his speeding mates, but can only identify them by sense of touch. The machine sizers only hear the clatter of their revolving "lagged" rolls; and divine the aisle guarded by a vibrating line of invisible and, therefore, dangerous power-driven belts. In cold and damp weather, in dye room or plank shop, there is no escape for the worker from the hot, podgum-scented fog; through which the strongest electric spot light shows blurred and ineffectual. In addition, all kettles are drained twice a day, but without direct sewer connections; the hot water flowing through open drains in the cement floors of the best shops, or spreading out over the whole department in the majority of cases. The same traditional practice also obtains in the dye room. Moreover, the brim and tip stretching and blocking machines are continually slopping over; condensed steam drips from ceiling and rafters; while each starter and sizer contributes his quota of sousing and splashing to a resulting unparalleled total of handicaps to health and industrial efficiency.

There are few familiar with earlier winter trade conditions at their worst who can not recall seeing highly skilled American workers standing with chilblained feet in water but little above the freezing point; dripping with steam and sweat from the waist upward; their hands raw from the friction of their plank pins and wooden or leather shields (called gloves); an old umbrella hung overhead to keep off the trickling condensation from the roof; uncomplainingly paying their physical toll of colds,

coughs, bronchitis, pneumonia, consumption, and mercury "shakes," to the so-called "necessary hazards" sanctioned by centuries of hat making.

On the other hand, there is none familiar with certain of our largest factories (whose model concrete-floor construction, free outside ventilation, ample light, and location of the sizing department in the upper story would seem to possess all the obvious advantages due to modern sanitary standards) who does not know that when natural draft hoods alone are relied on for steam removal, the results are distinctly unsatisfactory. Even in such shops, for at least five months of normal winter weather, the workers must rely on sense of touch rather than vision in the operations of starting and sizing. Tests have shown that the humidity in the vicinity of the worker approaches the saturation point; although health risks are lessened by other sanitary provisions, at all seasons they are subjected to the almost daily discomfort of steam and excessive heat.

Serious as are the physical effects of such habitual exposure to heat and humidity during working hours, there are also allied risks incidental to the ordinary back-shop practices which for generations have been ignored alike by employer and employees. While a lack of proper washing facilities and the prevalence of unsanitary toilets (including those in detached buildings that involve chilling exposure of workers to inclement weather) are a health menace, the absence of airy, well-heated dressing rooms (where street clothing may be kept during the day and wet working clothing be changed and hung to dry over night) is largely responsible for the back-shop's sickness and death record from respiratory diseases.

The report states that efforts to control the steam hazard have almost universally resulted in failure. An account is given of a costly failure in the Danbury district which was based upon the scientifically correct principle that raising the temperature of the atmosphere immensely increases its moisture-carrying capacity. However, its successful operation was found to be almost impossible owing to the difficulty of maintaining a purely mechanical means of air exchange, for which closed windows and tight walls are the first requisite.

After months of investigation, experimentation, and discussion with ventilation experts the New Jersey Department of Labor decided upon the direct method of steam control at the point of origin rather than the adoption of the warm-air system. Briefly stated, this system is based on the idea that the place to control steam is at the point where it is generated, and that it should be confined at that point and drawn off before it has a chance to circulate in the air of the workroom. The report indicates that practical experience has proved this method to be a complete success, and it is stated that nearly all the New Jersey felt hat factories have been equipped with this system.

That the hazard of dust and steam may be largely eliminated is emphasized by reference to a single Philadelphia hat factory in which, it is stated, "all the health problems of the blowing room have been solved."

The methods employed in meeting the problems of dust and humidity are described in detail.

The universal practice of running the waste water from sizing kettles and dyeing vats over the floor through open drains is not approved by the department.

Workers in the front shop are in many factories subjected to dust and heat hazards, although to a much less degree than in the back shops, and in addition the air in rooms where crown and brim ironing are done is vitiated by the long lines of gas-heated ironing machines. Not only is the oxygen exhausted by combustion but it is an exception, declares the report, to find installations entirely free from gas leaks. Furthermore, the fire hazard must be considered. In some establishments these dangers have been eliminated by the use of electricity instead of gas, and where the use of gas is continued the department of labor requires efficient exhaust ventilation.

In the surface-finishing department the hat is singed by the use of naphtha, the fumes of which must be carried outside. In the trimming room, where women only are employed, it was found that in New Jersey factories ventilation is sometimes inadequate but that few such rooms are other than well lighted and cheerful. Toilet facilities were too often found to be inadequate or unsanitary, washing arrangements below standard, and dressing and lunch rooms absent or cheerless. However, it is noted that these disadvantages to health and efficiency are being done away with as rapidly as trade conditions permit.

To eliminate the dangers to health mentioned in the report and thus make the various occupations of the hatting industry safe and sanitary the department of labor has issued the following summary of sanitary standards, which it requires all shops to observe:

All mixing should be done mechanically in an inclosed device. There should be no layering-down or mixing in the open.

The fur mixture should be fed into the "devil" by means of an inclosed automatic device.

The "devil" should be tightly housed and the feed opening properly safeguarded. All settling chambers should be rendered as dust proof as possible by means of cheesecloth coverings over the necessary wire-mesh openings.

All boxes containing fur mixture should be kept tightly covered during transportation or while standing in the workroom.

All blowing machines should be fed by means of an automatic device; and all dust and fur fiber liberated during the blowing and cleaning operations should be removed from the air of the workroom either by means of the exhaust system standardized in the bulletin, or other approved and equally efficient device.

Vacuum or wet cleaning only should be employed in the dusty departments; and no dry sweeping during working hours or cleaning by means of compressed air should at any time be permitted.

The temperature of the blowing room (when due to artificial heat) should not be permitted to exceed 75°, and when live steam is employed to increase the humidity, excess temperature should be prevented by means of a cold-water spray, or other efficient device.

Fourteen feet should be the minimum height of ceiling in all mill forming-rooms where the feeder stands on a raised platform at the rear of the forming-machine. When the ceiling is lower than this requirement, the platform should be lowered, and a double inclined apron attachment to the forming machine or other device be adopted.

The temperature of the mill room (when due to artificial heat) should not be allowed to exceed 75 degrees; and when live steam is employed to increase the humidity, excess temperature should be prevented by means of a cold-water spray or other efficient device.

All steam generated in the operations of starting, first and second sizing, dyeing and blocking should be controlled and eliminated by means of efficient mechanical exhaust ventilation, such as have been standardized in the bulletin.

Wherever factory construction permits, all kettles should be emptied through closed drains to central traps with convenient clean-outs, and thence to the sewer. In all shops where the contents of the kettle is pulled and allowed to flow over the floor or in open drains, substantial wooden floor-gratings should be provided.

Fixed pegs should not be permitted in any drying room which must be entered while hot by the worker. Unless it is the invariable custom of a factory to only turn on steam outside of work hours, movable racks or other devices are required, and the dry room should be of a type standardized in the bulletin.

Wood alcohol fumes should not be permitted to pollute the air of the workrooms either during the shellacking or drying operations. Efficient means for their removal should be installed, and care exercised to safeguard against the hazard of explosion.

All dust generated in the operation of pouncing and sandpapering machines should be controlled and eliminated by means of the efficient mechanical exhaust ventilation standardized in the bulletin.

All steam pots and singeing flames should be hooded and have direct connection to the outer air by means of pipes not less than 12 inches in diameter, with efficient natural draft ventilation.

All hand or mechanical ironing shells should be heated by means of electricity. Wherever gas is employed for ironing purposes, the health of the worker should be safeguarded by means of efficient mechanical ventilation.

When the grade of hats handled makes powdering necessary, the dust generated should be drawn away from the workers by means of efficient exhaust ventilation.

To control the excessive heat generated in the flanging and matricing operations, ample ventilation should be provided by means of windows, wall fans, or other devices; all steam plates should be covered on bottom and sides with asbestos to prevent direct radiation; and wherever possible an electrical device for heating the flange bags should be installed.

There should be daily gathering up of all waste; and only vacuum cleaning of dry departments should be permitted during working hours.

There should be separate washing facilities for men and for women, with hot and cold water; and separate dressing rooms, lockers, modern toilet accommodations, and pure, cool, drinking water, preferably bubbling fountains.

Standard safeguarding should be installed on all shafting under power-driven sewing machines, and on all belts, gears and wheels; and all set screws should either be removed or countersunk.

In the appendix of the report is a chapter in which are described the symptoms of mercury poisoning both as affecting the mouth and alimentary canal and the nervous and muscular systems. Asserting that "pitiful as are the physical effects of mercury poisoning, the great scourge of the felt-hatting industry is induced tuberculosis of the lungs," a statement which is amplified and supported by quotations from various medical authorities.

A method and table are presented for ascertaining the content of moisture in the air of a workroom. A certain amount of humidity is absolutely essential, but the danger sought to be guarded against as prejudicial to health is the combination of humidity and excessive heat. Experiments have seemed to prove that a requisite humidity may be attained without excessive heat.

The hatting industry is seasonal, practically no worker being employed for 12 months in the year. The enforced periods of rest, it is pointed out, while a hardship to the trade as a whole, are, from the health standpoint, physically beneficial to the workers.

THE HEALTH OF GARMENT WORKERS.¹

The Surgeon General undertook these investigations of the health of garment workers at the request of the Joint Board of Sanitary Control of the cloak, suit and skirt, and dress and waist industries in New York City. (See bulletins of this bureau Nos. 146 and 147.) The cloak, suit and skirt trades included in 1913 1,735 shops, employing 48,967 persons; the dress and waist industry included 700 shops, employing 36,868 persons. Thus both combined operated 2,435 shops with 85,835 workers.

The investigation began April 13, 1914, and lasted until November 1 of that year. It consisted of five principal inquiries: (1) Complete physical examination of about 2,000 male and 1,000 female workers in the industries concerned; (2) detailed studies of conditions of illumination in the shops of both industries; (3) test of the air, particularly as to carbon monoxide gas, in the shops of the cloak, suit and skirt and waist industries; (4) conditions of heat and humidity in the shops; and (5) a general sanitary inspection of the shops.

The physical examination made is said to have been thorough, and was conducted by the writers of the monograph, assisted by physicians of the Public Health Service and one from the Joint Board of Sanitary Control. An average of 40 to 50 minutes was given to each worker examined. It consisted in careful physical examinations with a view to recording physical data, the incidence of defects and diseases, the present state of health of each individual, and certain social data in relation to the social and economic status and the general standard of living of the workers.

Male workers in the cloak and suit trades are divisible into the following groups: Cutters; operators, who sew the garments together on electrically-driven sewing machines; finishers; pressers;

¹ Studies in vocational diseases. I. The health of garment workers, by J. W. Schereschewsky; II. The hygienic conditions of illumination in workshops of the women's garment industry, by J. W. Schereschewsky and D. H. Tuck. Prepared by direction of the Surgeon General. Washington, 1915. 224 pp. (Treasury Department, United States Public Health Service. Public Health Bulletin, No. 71, May, 1915.)

and miscellaneous workers engaged in various other operations, such as buttonhole making, draping, and the like. Females are classified into but three groups of workers, i. e., operators, finishers, and miscellaneous workers. Their duties are similar to the corresponding groups in the cloak and suit trades.

The data are presented separately for males and females. The results of the physical examinations are presented in relation to the various occupations of the two industries which formed the subject of the investigation, but are not related to the age of the persons examined.

The incidence of defects and diseases was noted in the cases of 3,086 workers (2,086 males and 1,000 females), and showed an average of 4.36 defects to each individual. Only about 2 per cent of those examined were found free from defects or diseases. The examinations, however, showed no vocational diseases peculiar to garment workers. The results are thus summarized, with some slight unimportant changes in percentages appearing in the original:

FREQUENT OR SIGNIFICANT DEFECTS OR DISEASES AMONG 2,086 MALE AND 1,000 FEMALE GARMENT WORKERS.

Defect or disease.	Males.		Females.	
	Number.	Per cent.	Number.	Per cent.
Anemia (1,998 males, 999 females).....	96	4.8	118	11.8
Albuminuria (1,512 examinations).....	45	3.0	.....	.....
Appendicitis, chronic.....	13	.6	17	1.7
Arteriosclerosis.....	65	3.1	3	.3
Bronchitis, chronic.....	81	3.9	11	1.1
Color blindness.....	56	2.7	1	.1
Constipation, chronic.....	466	22.3	268	26.8
Defective hearing.....	281	13.5	65	6.5
Defective posture.....	582	¹ 27.9	114	¹ 11.4
Defective teeth (1,911 males, 955 females).....	516	27.0	226	23.7
Pyrorrhea alveolaris.....	480	25.1	158	16.5
Defective vision.....	² 1,422	² 68.2	² 741	² 75.5
Deflected nasal septum.....	217	10.4	36	3.6
Diabetes mellitus (1,392 tests for sugar).....	17	1.2	.....	.....
Emphysema of lungs.....	70	3.4	2	.2
Flat and weak feet (all degrees).....	599	28.7	208	20.8
Gastric ulcer.....	2	.1	5	.5
Hernia (all varieties).....	152	7.3	3	.3
High blood pressure (150 mm. and over).....	165	7.9	14	1.4
Hypertrophy.....	.....	.....	12	1.2
Hypertrophy of tonsils.....	268	12.8	204	20.4
Low blood pressure (below 100 mm.).....	46	2.2	15	1.5
Menstrual disorders:	.....	.....	.....	.....
Amenorrhea (not physiological).....	.....	.....	4	.4
Delayed menstruation.....	.....	.....	10	1.0
Dysmenorrhea.....	.....	.....	200	20.0
Irregular menstruation.....	.....	.....	22	2.2
Menorrhagia.....	.....	.....	31	3.1
Nervous affections.....	207	10.0	52	3.2
Otitis media (chronic catarrhal, and suppurative).....	142	6.8	74	7.4
Pharyngitis and naso-pharyngitis.....	381	18.2	99	9.9
Piles, external, internal, and mixed.....	241	11.6	66	6.6
Pleurisy, fibrinous.....	51	2.4	25	2.5
Rhinitis, atrophic, and hypertrophic.....	612	29.3	198	19.8
Spinal curvature (all grades).....	1,050	50.8	205	20.5
Trachoma:	.....	.....	.....	.....
Active.....	8	.4	.....	.....
Old.....	6	.3	2	.2
Tuberculosis.....	65	3.1	12	1.2
Valvular disease of heart.....	37	1.8	23	2.3
Varicose veins of legs.....	62	3.0	23	2.3
Visceroptosis, including gastroptosis and nephroptosis..	54	2.6	21	2.1

¹ Further examinations shown in the text indicate a ratio of 50 per cent for both males and females.

² Thus in the original. Comparing p. 75 of the report, it appears that the percentages should be respectively 74 for males and 75.5 for females.

Apart from tuberculosis, with which 3.1 per cent of the males examined and 1.2 per cent of the females were found to be afflicted, the most common defects and diseases among garment workers were, in order of frequency for both sexes combined, defective vision (74 per cent), faulty posture (50 per cent of males), chronic nose and throat affections (26.2 per cent), defective teeth (26 per cent) and pyorrhea alveolaris (20 per cent), weak and flat feet (26 per cent), chronic constipation (23.7 per cent), dysmenorrhea (females, 20 per cent), hypertrophied tonsils (15.3 per cent), defective hearing (10 per cent), nervous affections (7.75 per cent).

The degree of physical development of garment workers is only fair, the average expansion of the chest for both males and females not being high. There appeared to be a great prevalence of faulty posture, particularly among male finishers, who showed the higher percentage. Chronic catarrhal affections of the nose and throat were found very common among garment workers, although the garment trades in themselves did not seem directly responsible for the existence of these conditions. The great prevalence of these diseases may be partly accounted for from the fact that the majority of garment workers have been city dwellers from birth and exposed to crowded and congested conditions, which are said to favor the occurrence of chronic nose and throat affections. Also common among garment workers are defective teeth and pyorrhea, as well as defective hearing and nervous affections, particularly neurasthenia. The prevalence of syphilis was decidedly low.

As to preserving the health of garment workers, the report concludes with certain recommendations, urging the necessity for the correction of physical defects and for the formation of correct postural habits, necessity for attention to oral hygiene, attention to the elimination of dust or "fly" from the air of the workshops, enforcement of regulations to guard against the spread of communicable diseases in workshops, necessity of maintaining the temperature of the shops in the cold season between 62° F. and 70° F., promotion of the use in the garment trades of adjustable seats with backs, establishment of a special dispensary for garment workers, establishment of sick benefit funds as inaugurated at present in some of the locals of the cloak, suit, and skirt makers' unions for the treatment of tubercular workers, and the extension of the system of physical examinations by the Joint Board of Sanitary Control so as to make it applicable to all workers who may apply.

The second part of the above study on occupational hygiene, concerning conditions of illumination in the workshops in the women's garment industry, urges, as the result of the examination of the workshops, adequate provisions for illumination, because of the existing

visual demands of the occupation and because of the presence of a large number of visual defects among the workers in the industries as disclosed by the investigation reported in Part I of the study. This study also showed that as the result of photometric measurements made during the summer of 1914 in a group of 34 typical workshops the illumination was inadequate in the case of a little over one-half the working planes measured and that departures from correct principles in illumination were common in the shops. The effects of these departures were such as to produce inadequate illumination, glare effects, lack of uniformity of distribution of illumination, and troublesome shadows.

In view of these findings the report makes recommendations both as to improving the daylight illumination of workshops as well as to improving the artificial illumination.

The report contains a group of appendixes dealing with matters of technical interest in producing adequate and proper illumination.

OLD-AGE RELIEF IN WISCONSIN.¹

In a pamphlet of 76 pages the Industrial Commission of Wisconsin presents the results of an investigation into the problem of relief for aged persons, the work having been undertaken in compliance with the provisions of a law (ch. 185, Acts of 1913), directing such an inquiry. The act prescribes "a thorough and complete investigation of the number, condition, and welfare of the aged and infirm in this State with a view of establishing old-age pensions." It was also directed that such recommendations and bills as the commission should deem necessary to offer should accompany the report.²

The commission is a permanent one, charged with the administration of all labor laws of the State, including the workmen's compensation law. The present report was made, therefore, by men who are in direct contact with the great body of wage earners, for whom the question of old-age relief is not to be answered by improved methods of charity, but by what the commission designates a "dignified form of support," in keeping with the character and habits of those who have rendered worthy industrial service, but whose declining years are without adequate provision for their material needs. The report does not claim exhaustiveness, nor does it advocate any existing plan or scheme of old-age pensions, but it offers suggestions favorable to the idea, and submits a rough estimate of the probable cost of such pensions on plans that might prove to be feasible.

¹ Wisconsin: Industrial Commission. Report on old-age relief, issued Mar. 1, 1915. Madison, 1915. 76 pp.

² An earlier study in the same field is the report of the Massachusetts Commission on Old-age Pensions, Insurance, and Annuities, Boston, 1910.

The reason for some provisions of the sort is found in five principal causes arising out of modern industrial conditions. In brief, these are (1) the great and increasing number of persons dependent upon the returns of their daily labor for the supplying of current needs; (2) the shortening of the effective working life by reason of the demand for speed in the performance of industrial operation, so that men not in any sense decrepit are none the less unable to secure employment because of the physical necessity of a degree of slowing up; (3) the generally increased longevity of human life, prolonging the unproductive period induced by the second cause; (4) the tendency of home and neighborhood ties to be broken, due to the mobility of our population, so that one may find himself in his declining years isolated from those to whom he might naturally and successfully look for needed assistance; (5) the more humane attitude toward poverty, especially where coupled with age, so that the aged poor are not so readily consigned to the almshouse as formerly. The result of these conditions has been the adoption of systematic measures in most industrial countries other than our own.¹ In Great Britain, Denmark, Australia, and New Zealand, State pension systems exist. Belgium, France, Germany, Italy, Spain, and Sweden provide old-age insurance under State management.

In discussing the present means of support for the aged in Wisconsin, seven principal sources are considered: (1) Individual savings, characterized as an uneconomic method because by it every person is charged with providing, by a lifetime of effort and often of painful frugality, against a contingency which only a few persons will survive to experience; this uncertainty, and often the impracticability, combines with other causes to render this an inadequate general dependence; (2) private insurance, which has been but little practiced in this country, either by purchasing annuities or through trade-unions or by fraternal organizations; (3) support by children and relatives, which in many cases doubles the burden to be discharged by those undertaking to provide for a growing family, even if there be those in existence who could be called upon for aid;

¹ Action has been taken in one State of the Union, Arizona having enacted by initiative petition and popular vote an act granting to needy citizens of the United States, 60 years of age and over, who have resided in the State for five years prior to application therefor, a pension of \$15 per month so long as they continue to live in the State.

An act of the Territory of Alaska also provides a form of old-age pensions for "any pioneer of Alaska, regardless of sex, who has attained the age of 65 years and shall have resided in Alaska for 10 consecutive years or more since the year 1905." An act of 1913 provided for the establishment of a pioneers' home at Sitka, and proposed another for indigent pioneers in the interior of the Territory. These are for the relief of indigent persons who have no relatives or members of their families required by law to support them. The present act provides that persons entitled to the benefits of these homes may in lieu of taking residence therein receive a pension not exceeding \$12.50 per month in amount, the same to be paid quarterly. The board of trustees of the home receives and investigates applications, and makes payments through the commissioners of the several precincts of the Territory. The sum of \$10,000 yearly is appropriated, arrears of payments, if any, to be a claim on future funds when available (ch. 64, Acts of 1915).

(4) retirement or service pensions provided by employers, which is in practice and of necessity a restricted resource; (5) United States military pensions, which are now paid to some 19,000 residents of Wisconsin—a number which must decrease from year to year; (6) public poor relief, mainly by means of almshouses; and (7) private charity, either through the maintenance of “old people’s homes” or more uncertain and transitory agencies.

The inadequacy of these methods to meet the needs of the indigent portion of the 185,000¹ inhabitants of the State 60 years of age and upwards is so evident as to require little more than their statement to raise the question as to what other measures may be adopted. Four forms of relief are discussed: (1) Voluntary insurance under the supervision and encouragement of the State; (2) compulsory insurance of wageworkers; (3) universal compulsory insurance; and (4) gratuitous pensions.

Those who advocate the first method claim that it encourages thrift and maintains the self-respect of its beneficiaries. In practice, but little success has attended a half century of effort for its development, and it has in some countries been partly or entirely superseded by other methods. The compulsory insurance of wage earners, chiefly practiced in Germany, though France adopted this plan in 1910, is also commendable in that it avoids the idea of dependence on charity, even though it can hardly be said to encourage voluntary thrift. Objections pointed out are its omission of many who may need such protection no less than wage earners, as women who are home workers not for wages, small craftsmen, peddlers, and the like; the inapplicability of such a system to a country in which labor is so largely migratory as in Wisconsin; and the length of time—at least 30 years—that must elapse before substantial annuities begin to mature, thus leaving without adequate protection those who are already old. Universal compulsory insurance meets the first objection but not the other two. It is stated in the conclusion, moreover, that the contributory systems of foreign countries do not receive from the beneficiaries more than 30 per cent of the benefits secured to them, so that it would appear “that the value of the contributory principle is more sentimental than practical.”

The remaining method, gratuitous or noncontributory pensions, is on the other hand, both comprehensive and immediately effective. While nominally noncontributory, it is argued that all have contributed in so far as they have paid taxes, and further that as laborers they have helped create the body of wealth out of which all taxes are paid. The conditions of the receipt of such a pension relate to age, residence, property, character, and conduct. The objections

¹ Estimated by the commission. The number returned by the census of 1910 was 176,864.

commonly urged are its cost, the discouragement of thrift, an unfavorable effect on character, and a tendency to weaken family ties.

As to cost the report argues that it is rather a matter of incidence than of amount, the British pension law bearing more heavily on the general revenue, while the German compulsory insurance system takes its toll from wages and the employer's profits. It is also urged that the relief proposed will not discourage saving, since it will meet only bare necessities, and must be coupled with a modest provision by the recipient to afford a fair degree of comfort. After 20 years of experience in Denmark the number of applicants for old-age pensions shows a tendency to decrease rather than the contrary, so that it can not be said that habits of thrift have declined. As to the effect on self-respect, it is submitted that this will depend mainly upon public opinion. If considered in the light of deferred real wages instead of poor relief, no debasing effect is anticipated. The argument as to the influence on family ties seems of doubtful merit to the writer of the report, as it would be a strange theory to suggest that a parent or grandparent is dearer and welcomed into one's home the more readily as he is the more burdensome.

Setting aside speculative theories, the report proposes two methods, not mutually exclusive, the one providing for voluntary insurance under State management, and the other for a system of old-age pensions resembling that in operation in Denmark. Under the second plan which is considered at some length actual indigence is not required, nor may those who can adequately support themselves receive pensions. Vagrants, idlers, and others who can not pass prescribed character tests receive nothing from this "dignified form of support," but must have recourse to poor relief of the old type. A maximum benefit of \$150 per annum is proposed, the probable average being \$10 per month, the amount to be raised one-half by a general poll tax, and one-half from the revenues of the State, the aggregate cost being estimated at \$3,600,000 per annum. The administration proposed is by the State board of control, probably through a superintendent of old-age support, acting locally through the county judges. Pensions are to begin at the age of 65, or 60 if permanently incapacitated for gainful labor, their receipt not to affect civil or political status.

The plan is worked out in considerable detail as to conditions of receipts of benefits, the disposition of any property owned, etc. Less complete is the discussion of the plan for voluntary insurance under State management. It is pointed out, however, that 400,000 wage earners of the State pay \$1,600,000 annually for "industrial insurance," of which amount only \$350,000 was returned to policyholders in 1913. It is argued that with proper administration this

sum could ultimately endow every wage earner in the State with a monthly income of \$6 at the age of 65 years.

Twenty pages of the report are given to a discussion, chiefly statistical, of the condition of the aged in Wisconsin, while in the last 33 pages are summarized the history and results of the various systems of old-age relief in use in foreign countries, with conclusions based thereon.

These conclusions are, in brief, that voluntary insurance has been inadequate as a general means of relief, any success which it may have attained being nearly in proportion as it has been subsidized by the State, and that even under compulsory insurance not more than a fraction of the benefit fund is raised from the beneficiaries themselves; that no system can meet the problems of old-age relief without taking into account unmarried, widowed, and divorced women; that the pension age should be set not later than the age of 65; and that in most foreign countries the provision for pensions is inadequate in amount, though in passing upon this, differences in the standards of living and the costs of necessities must be taken into consideration.

RETAIL PRICES OF FOOD IN FOREIGN COUNTRIES.

AUSTRIA (VIENNA).

The prices quoted in the table below are, in the case of meats, from the central meat market, and those for other articles are from the public markets. They show the general increase in prices in Vienna in November and December, 1915, as compared with those months in 1914. If compared with 1913, when no war was in progress, the increases would probably be even greater. The prices show lowest and highest points.

RETAIL PRICES OF FOOD IN VIENNA MARKETS NOV. 6 AND DEC. 12, 1914, AND NOV. 6 AND DEC. 4, 1915.

(Source: Neue Freie Presse, Nov. 8 and Dec. 13, 1914, and Nov. 7 and Dec. 5, 1915.)

Article.	Unit.	Nov. 6, 1914.	Nov. 6, 1915.	Dec. 12, 1914.	Dec. 4, 1915.
		<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>
Beef, fore quarter.....	Pound....	11.4- 20.1	31.3- 49.7	11.0- 20.3	33.1- 47.9
Beef, hind quarter.....	do.....	11.8- 21.2	32.2- 55.2	14.8- 21.2	34.1- 51.6
Beefsteak.....	do.....	16.6- 19.5	58.0- 58.9	18.4- 20.3	47.9
Veal.....	do.....	13.6- 19.8	34.1- 42.4	13.6- 20.3	29.5- 38.7
Pork.....	do.....	14.1- 22.1	45.1- 51.6	15.5- 22.1	38.7- 51.6
Cabbage, white.....	Each.....	1.6- 5.3	.8- 7.1	1.2- 3.2	1.2- 4.9
Cabbage, red.....	do.....	2.4- 8.1	4.1- 12.2	2.0- 10.2	4.1- 10.2
Lemons.....	Dozen.....	9.6- 19.2	19.2- 28.8	9.6- 14.4	24.0- 28.8
Potatoes.....	Bushel.....	66.3-132.6	82.9-176.8	66.3-154.7	82.9-176.8
Onions.....	Pound.....	2.9- 4.1	5.2- 6.1	3.3- 4.2	5.5- 6.3
Beans, green.....	do.....	5.5- 7.4	6.1- 7.0	11.0- 12.9	.....
Sauerkraut.....	do.....	2.6	3.7- 4.4	2.6	4.4
Tomatoes.....	do.....	2.8- 4.6	6.4- 7.0	3.3- 5.2	.....
Peas, yellow.....	do.....	5.5- 11.0	16.6- 22.1	5.5- 12.5	.....
Butter.....	do.....	17.3- 39.8	55.2- 84.7	31.3- 44.2	57.1- 81.0
Peas, green, unshelled.....	do.....	5.5- 7.4	11.0- 12.2	11.0- 12.9	.....
Eggs, fresh.....	Dozen.....	32.5- 37.5	48.7- 54.1	37.5- 48.7	58.5- 60.9

CANADA.

The chief feature of Canadian prices during 1915 as reported by the Labor Gazette of the Department of Labor was the continued advance in materials, especially of iron and steel and their products. Advances were also noted for wheat, oats, flour, and oatmeal.

In retail prices the weekly cost of 29 staple foods arose from \$8.02 to \$8.13 from November to December, 1915. From December, 1914, to December, 1915, the rise was from \$7.95 to \$8.13. Eggs, butter, cheese, bread, flour, rice, beans, evaporated apples, potatoes were slightly higher, while meats were generally lower during December than in November. Coal and wood were higher and rents remained unchanged. The following table shows the cost per week of a family budget of 29 staple articles of food in terms of the average price prevailing in some 60 industrial centers in the nine provinces of Canada, 1910 to 1915:

COST PER WEEK OF A FAMILY BUDGET OF STAPLE FOODS IN TERMS OF THE AVERAGE PRICES OF THE CITIES IN EACH PROVINCE, 1910 TO 1915.

Province.	1910	1911	1912	1913	1914	1915	Decem- ber, 1914	Novem- ber, 1915	Decem- ber, 1915
Nova Scotia.....	\$6.817	\$6.776	\$7.166	\$7.289	\$7.475	\$7.826	\$7.806	\$8.071	\$8.239
Prince Edward Island.....	5.812	5.795	6.107	6.338	6.693	6.617	6.894	7.023	6.953
New Brunswick.....	6.548	6.836	7.130	7.041	7.443	7.682	7.755	7.866	8.108
Quebec.....	6.331	6.457	6.968	6.870	7.158	7.387	7.310	7.578	7.760
Ontario.....	6.504	6.666	7.251	7.203	7.479	7.676	7.742	7.947	8.114
Manitoba.....	7.462	7.405	7.884	7.873	8.149	8.071	8.269	8.19	8.427
Saskatchewan.....	7.859	8.083	8.164	8.250	8.327	8.299	8.805	8.181	8.315
Alberta.....	7.998	8.081	8.147	8.327	8.266	8.209	8.467	8.175	8.356
British Columbia.....	8.321	8.789	9.028	9.128	7.606	8.807	8.796	8.618	8.649
Total.....	6.954	7.138	7.339	7.337	7.731	7.866	7.951	8.016	8.128

FRANCE (PARIS).

The bulletin of the Ministry of Labor reports a very sharp advance in the prices of many of the necessities during the third quarter of 1915. In one community the average price of all food products is reported as having increased 50 per cent during the quarter. In general the cost of living has increased from 25 to 33 per cent over a year ago.

No presentation of actual retail prices is given, but the following table affords a comparison of wholesale prices of certain commodities in Paris during the months indicated in 1914 and 1915 and of the general average in September and October for the period 1901 to 1910.

82 MONTHLY REVIEW OF THE BUREAU OF LABOR STATISTICS.

WHOLESALE PRICES—SEPTEMBER AND OCTOBER, 1914, 1915, JULY, 1914, AND AVERAGES, SEPTEMBER AND OCTOBER, 1901-1910.

Article.	Sep-tem-ber.	Octo-ber.	July.	Sep-tem-ber.	Octo-ber.	1901-1910	
						Sep-tem-ber.	Octo-ber.
Sugar, white, No. 3.....per 100 pounds..	(¹)	\$6.670	\$2.950	\$3.670	\$4.620	\$2.550	\$2.450
Oil, linseed.....do..	\$7.700	8.120	5.340	5.340	5.340	5.300	5.340
Oil, rapeseed.....do..	11.560	12.810	6.390	7.510	7.680	5.400	5.430
Wheat.....per bushel..	1.440	1.470	1.510	1.460	1.470	1.200	1.220
Flour.....per 100 pounds..	(¹)	(¹)	3.040	3.330	(¹)	2.710	2.730
Barley.....per bushel..	(¹)	(¹)	(¹)	(¹)	.700	...	...
Oats, black.....do..	(¹)	(¹)	.610	.660	.640	...	...
Beef ².....per pound..	.182	.186	(¹)	.149	.151	...	...
Veal ².....do..	.235	.214	(¹)	.166	.182	...	...
Mutton ².....do..	.197	.183	(¹)	.214	.175	...	...
Pork ².....do..	.205	.193	(¹)	.151	.131	...	...
Poultry ².....do..	.285	.272	(¹)	(¹)	(¹)	...	...
Cabbage ².....per 100 pounds..	6.780	6.580	1.930	1.740	1.160	...	...
Beans, green ².....do..	4.810	5.690	4.380	2.190	4.380	...	...
Potatoes, Holland ².....per bushel..	.870	.960	1.160	.740	.790	...	...
Potatoes, round, green, white ².....do..	.790	.760	.630	.500	.530	...	...
Fish, select ².....per pound..	.438	.569	.350	.219	.306	...	...
Fish, ordinary ².....do..	.109	.131	.086	.070	.070	...	...
Butter, Isigny.....do..	.361	.398	.268	.229	.235	...	...
Butter, common.....do..	.338	.350	.256	.196	.233	...	...
Eggs.....per dozen..	.352	.405	.226	.267	.328	...	...
Cheese, green.....per pound..	.164	.200	.079	.130	.146	...	...
Cheese, dry.....do..	.269	.309	.193	.193	.172	...	...

¹ Not reported.² At the stockyards.³ Central depots.

GERMANY (BERLIN).

The following table shows the average retail prices of certain foods, principally meats, in the municipal market of Berlin during the months of November and December, 1915, as compared with the same months of 1914. The increases are considerable and would be somewhat greater if comparison were made with the corresponding months of 1913, when no war was in progress. Lack of official sources has made necessary the use of newspaper quotations.

RETAIL PRICES OF FOOD IN THE MUNICIPAL MARKETS OF BERLIN.

[Source: Vossische Zeitung, No. 616, Dec. 2, 1915, and No. 10, Jan. 6, 1916.]

Article.	Unit.	Week of—			
		Nov. 23 to Nov. 28, 1914.	Nov. 22 to Nov. 27, 1915.	Dec. 28, 1914, to Jan. 2, 1915.	Dec. 27 to Dec. 31, 1915.
Beef:		Cents.	Cents.	Cents.	Cents.
Sirloin, round steak, rump.....	Pound..	22.2	32.6	22.5	30.3
Breast.....	do.....	18.8	28.7	18.8	31.5
Veal:					
Cutlets, loin.....	do.....	21.4	33.5	22.0	38.9
Breast.....	do.....	20.1	31.6	20.3	36.6
Mutton:					
Chops, loin.....	do.....	21.2	34.1	21.8	37.2
Breast, flank.....	do.....	19.0	31.5	19.7	34.2
Pork:					
Loin, spareribs.....	do.....	20.3	1 30.2	21.0	1 30.2
Ham, fresh.....	do.....	18.1	1 30.2	19.0	1 30.2
Shoulder, belly.....	do.....	17.7	1 30.2	18.4	1 30.2
Bacon, smoked.....	do.....	23.8	56.6	23.3	1 49.7
Ham, smoked, sliced.....	do.....	37.2	65.4	37.8	1 64.8
Butter.....	do.....	33.5	54.9	36.3	1 57.9
Lard.....	do.....	21.6	59.4	23.8	1 54.0
Potatoes.....	Bushel..	1 51.8	1 51.8	1 51.8	1 51.8
Eggs.....	Dozen...	37.1	62.8	40.0	80.0

¹ Legal maximum price.

GREAT BRITAIN.

On January 1, 1915, the retail prices of food had increased approximately 18 per cent over the average prevailing price of July, 1914, according to the Board of Trade Labor Gazette. Since that time there has been a comparatively steady advance in prices until January 1, 1916, when the increase amounted to 45 per cent of the price of July, 1914. These data are based on reports of 500 to 600 returns of prices from every town in the Kingdom having a population of over 50,000, about 200 towns with a population ranging from 10,000 to 50,000, and about 250 places having a population less than 10,000. The following summary shows the increase at the first of each month during 1915 over the corresponding months of 1914:

PER CENT OF INCREASE IN 1915 OVER 1914, BY MONTHS.

January.	Febru- ary.	March.	April.	May.	June.	July.	August.	Sep- tember.	Octo- ber.	No- vember.	Decem- ber.
18	22	24	24	26	32	32½	34	35	40	41	44

Taking the price of each article as reported in July, 1914, as a base the following table shows the per cent of increase, by half-yearly periods, in towns having a population of over 50,000, and separately for small towns and villages:

AVERAGE PER CENT OF INCREASE IN PRICES OF CERTAIN ARTICLES SINCE JULY, 1914, ON JANUARY 1 AND JULY 1, 1915, AND JANUARY 1, 1916.

Article.	In cities having a population of over 50,000.			Small towns and villages.		
	Jan. 1, 1915.	July 1, 1915.	Jan. 1, 1916.	Jan. 1, 1915.	July 1, 1915.	Jan. 1, 1916.
Beef, British:						
Ribs.....	8	39	37	6	36	34
Flank, thin.....	15	51	51	8	41	39
Beef, chilled or frozen:						
Ribs.....	18	49	51	15	44	43
Flank, thin.....	32	70	70	21	58	57
Mutton, British:						
Legs.....	6	28	27	5	30	28
Breast.....	16	49	48	7	35	34
Mutton, frozen:						
Legs.....	19	44	45	14	38	38
Breast.....	28	66	70	21	57	56
Bacon, streaky.....	9	20	34	5	15	28
Fish.....	51	78	119	31	51	75
Flour, household.....	18	46	46	23	51	52
Bread.....	18	43	45	14	38	39
Tea.....	14	29	49	13	26	48
Sugar, granulated.....	69	70	97	65	65	89
Milk.....	6	11	30	7	9	28
Butter:						
Fresh.....	12	15	32	16	15	36
Salt.....	10	15	30	14	17	33
Cheese.....	10	34	32	10	33	32
Margarin.....	5	5	8	4	4	6
Eggs.....	62	27	108	65	20	102
Potatoes.....	¹ 11	4	.....	¹ 22	¹ 8	¹ 10
All articles (weighted increase).....	19	35	48	17	30	42

¹ Decrease.

The following shows the trend of prices by means of index numbers for the period of 1900 to 1915. These numbers are based on the average of annual retail prices of 23 articles, the prices for the year 1900 being taken as 100.

INDEX NUMBERS FOR THE PERIOD OF 1900 TO 1915.

Year.	Index No.	Year.	Index No.	Year.	Index No.
1901.....	100.4	1906.....	102.0	1911.....	109.4
1902.....	101.0	1907.....	105.0	1912.....	114.5
1903.....	102.8	1908.....	107.5	1913.....	114.8
1904.....	102.4	1909.....	107.6	1914.....	116.8
1905.....	102.8	1910.....	109.4	1915.....	148.6

ITALY.

The semimonthly bulletin of the Italian Labor Office publishes at the beginning of each month a short table of retail prices of seven articles of ordinary consumption, showing average prices in several cities (40 to 43) as furnished by cooperative stores, local labor unions, and chambers of commerce. Relative prices of these same commodities are also shown in parallel columns, the base from which changes are reckoned being the average prices for the year 1912.

The following table shows the actual and relative prices of the seven commodities for each of the months September, October, and November, 1914 and 1915.

ACTUAL AND RELATIVE PRICES OF 7 ARTICLES OF FOOD BASED ON AVERAGE PRICES IN CITIES IN ITALY, SEPTEMBER TO NOVEMBER, 1914 AND 1915.

AVERAGE ACTUAL PRICES.

Article.	Unit.	September.		October.		November.	
		1914	1915	1914	1915	1914	1915
		Cents.	Cents.	Cents.	Cents.	Cents.	Cents.
Bread, wheaten.....	Pound..	3.5	4.3	3.6	4.2	3.8	4.3
Flour, wheat.....	do.....	3.6	4.7	3.7	4.7	3.8	4.9
Macaroni, spaghetti, etc.....	do.....	4.8	6.1	5.0	6.2	4.9	6.2
Beef.....	do.....	13.0	19.7	13.4	20.0	13.8	20.0
Bacon.....	do.....	18.4	23.5	18.6	23.6	18.5	23.8
Oil, table.....	Quart...	35.6	38.2	34.2	39.3	34.5	39.8
Milk.....	do.....	6.4	6.7	6.5	6.6	6.6	6.7

RELATIVE PRICES.

(Average prices for 1912=100.)

Bread, wheaten.....	Pound..	94.6	114.8	98.0	113.6	101.1	115.5
Flour, wheat.....	do.....	93.2	121.9	94.7	121.9	99.1	125.8
Macaroni, spaghetti, etc.....	do.....	98.1	124.7	102.0	128.2	101.0	127.5
Beef.....	do.....	86.0	130.8	89.3	133.1	91.9	133.1
Bacon.....	do.....	100.9	128.8	102.5	129.8	101.3	130.8
Oil, table.....	Quart...	96.0	104.5	93.6	107.5	94.3	109.0
Milk.....	do.....	102.3	106.6	103.4	105.8	105.0	107.5
General average.....	.....	96.0	118.8	97.6	110.0	99.1	121.3

NETHERLANDS.

No actual retail prices of any considerable scope are available for the Netherlands, although the Maandschrift of the Dutch Statistical Bureau reports each month the relative retail prices of 28 articles of ordinary consumption from two cooperative stores doing a retail business in Amsterdam, Haarlem, Arnhem, Utrecht, Leeuwarden, and at The Hague. The base price on which the changes have been calculated is the average monthly price for the year 1893. No data are available for seasonal comparison. The index prices for 1913 and for the period comprising the first seven months and the last five months in 1914 and for June to November of 1915 are given in the table which follows:

RELATIVE PRICES OF 28 ARTICLES OF HOUSEHOLD NECESSITY, NETHERLANDS,
1913, 1914, AND THE LAST HALF OF 1915.

(Average monthly prices for 1893=100.)

Article.	1913	January to July, 1914.	August to De- cember, 1914.	June.	July.	Aug- ust.	Sep- tem- ber.	Octo- ber.	No- vem- ber.
Beans:									
Brown.....	154	150	164	171	171	171	175	186	193
White.....	166	169	179	207	214	214	210	203	203
Peas.....	150	167	161	181	186	172	181	175	178
Peas, yellow.....	125	152	139	175	182	182	170	159	159
Peas, green.....	157	140	147	150	160	160	170	167	180
Barley, pearl.....	113	110	126	145	145	145	145	148	148
Buckwheat, hulled, cleaned.....	104	104	137	162	167	167	175	179	187
Oatmeal.....	103	103	107	140	140	140	143	143	140
Cheese:									
Leyden.....	140	140	139	167	164	160	160	164	167
Full cream.....	124	126	124	149	145	138	137	135	135
Coffee.....	94	87	89	91	91	91	92	93	94
Oleomargarine.....	127	98	101	102	102	102	102	102	102
Flour:									
Rye.....	85	78	85	115	115	115	119	119	119
Wheat.....	124	124	141	171	182	171	159	153	147
Buckwheat.....	105	105	119	143	143	152	167	176	176
Butter.....	94	94	101	136	140	147	145	129	131
Oil, rapeseed.....	136	133	142	208	215	216	216	192	199
Rice.....	116	112	110	128	128	116	119	119	125
Soda.....	83	83	100	100	100	100	100	117	150
Starch.....	103	103	107	133	137	137	140	137	137
Sirup.....	100	100	100	129	129	136	136	136	136
Sugar:									
Moist.....	89	89	95	111	115	115	115	115	115
Granulated.....	85	87	92	97	100	100	100	102	100
Tea.....	112	112	114	115	117	120	120	119	120
Vermicelli.....	121	117	141	214	210	210	210	207	207
Soap:									
White, Bristol.....	100	100	100	117	123	126	134	128	128
Green, soft.....	87	83	92	146	154	129	112	100	112
Salt.....	80	80	90	90	90	90	90	90	90
All commodities.....	114	113	121	145	148	147	147	145	148

EMPLOYMENT IN FOREIGN COUNTRIES.

The REVIEW has reported from time to time conditions of employment in foreign countries, as shown by statements found in the official labor periodicals of those countries. These summaries were given at some length in issues of the REVIEW for July, October, and December. Summaries, for recent months, of conditions in Canada, Germany, and Great Britain follow:

CANADA.

The Labor Gazette of the Canadian Department of Labor summarizes employment conditions throughout the Dominion in 1915 in these words:

The opening of the year 1915 showed a marked change from the conditions existing at the commencement of 1914. At the beginning of that year the depressed conditions of the previous year were still apparent, but in 1915 the improvement which became noticeable from month to month during the latter part of the previous year had become fairly well pronounced and the close of 1915 witnessed a return to almost normal conditions in many respects. While at the close of 1914 there was still considerable unemployment, and in some localities this condition existed during the early months of 1915, the gradual enlistment of men for over-seas service, the employment of others in the manufacture of munitions and other military supplies, in agricultural and lumbering operations and the heavy falling off in immigration, all combined to bring conditions in many parts of the Dominion back to almost a normal basis so far as employment was concerned. Manufacturing in many lines outside of special activity in the manufacture of munitions of war was improved; lumbering showed activity practically throughout the year; fishing on the whole was good; mining, both coal and metal, showed great improvement, and toward the latter part of the year was back to, if not above, the normal activity of previous good years. Outside of building operations, which continued to be dull, practically all the Dominion's industries showed great improvement.

As the department has but recently commenced the publication of the activities of employment bureaus throughout the Dominion, only a limited amount of statistical data is available. Eleven employment bureaus of the Young Women's Christian Association reported 1,217 vacancies notified and 253 women and girls placed during November, 1915. Twelve bureaus of the Salvation Army reported the distribution of 1,402 casual jobs to 870 persons. The nine public employment offices cooperating with the department reported 4,668 vacancies and 3,782 individuals placed. The operations of the last-named offices are here summarized:

REPORTS OF PUBLIC EMPLOYMENT BUREAUS FOR THE MONTH ENDED NOVEMBER 30, 1915.

Location and name.	Days open for business.	Individuals on register at beginning of period.	Individuals registered during period.	On register at end of period.	Vacancies notified.	Vacancies filled.	Individuals placed.	Individual placed outside city.
Quebec: Provincial free employment bureau.....	25	91	197	154	63	46	43	.....
Sherbrooke: Provincial free employment bureau.....	24	.....	168	168	174	.....	124	.....
Montreal:								
Provincial free employment bureau.....	25	.....	341	.....	421	.....	306	.....
Municipal employment bureau.....	25	169	341	164	791	765	226	5
Toronto: Civic employment bureau.....	26	.....	.....	.....	756	735	674	180
Winnipeg: Free employment bureau.....	26	.....	.....	.....	1,665	.....	1,343	65
New Westminster: Public employment bureau.....	25	.....	17	407	32	19	19	.....
Vancouver: Free employment bureau.....	26	.....	315	451	366	359	359	34
Victoria: Public employment bureau.....	26	.....	68	1,008	400	399	399	5

¹ Positions filled.

GERMANY.

The Reichs-Arbeitsblatt reports that since German industry has adjusted itself to the conditions arising from the war, economic development has taken an even course, with insignificant changes from month to month. During September and October conditions in German industry were essentially the same as during the preceding months, with a slight improvement in November. General industrial conditions were reported as satisfactory, exception being made of conditions in the textile and building industries. Mining and war-supplying industries continue active. Improvement is reported in shipping activity on the Rhine.

Returns from employers for September show an increase of 18 per cent in the number of workmen employed, as compared with September of the preceding year, and returns for October and November, 1915, show an increase of 15 and 14 per cent, respectively, in the number employed as compared with the same months in 1914. In September male workers formed the larger part of the increase noted, while in October and November the larger part was due to the influx of female workers. If employment during the above three months of 1915 is compared with employment in the same months of 1913, there is indicated a decrease in the number of workmen employed of 9, 14, and 18.5 per cent, respectively.

Practically no change of significance as to the percentage of unemployment in trade-unions, as compared with the preceding months, July and August, is noted. The per cent of unemployment in August and September, 1915, was 2.6, and in October and November 2.5.

Reports from the labor exchanges show a decline in the number of applicants for positions in all three months of 1915 under review, as compared with these months in 1914. For every 100 situations registered as vacant in September, October, and November, 1915, the number of male applicants was 89, as compared with 200, 154, and 140, respectively, for the same months of 1914, and the number of female applicants was 170 in September, 182 in October, and 179 in November, 1915, as compared with 183, 191, and 189, respectively, for the same months in 1914.

GREAT BRITAIN.

The Board of Trade Labor Gazette reports that the high level of employment of recent months was fully maintained in December, and a general shortage of labor, except in some branches of the clothing trades, was reported. Compared with the corresponding month of 1914, there is considerable improvement noted.

Great scarcity of labor is reported in the mechanical industries, and the ship-building trades, in the cotton trade, and in the textile trades. Tin-plate works building trades, and brick works showed a decline in activity, the cause being seasonal in the latter two. The following table shows the per cent of unemployment in trade-unions during each month of 1914 and 1915:

PER CENT OF UNEMPLOYMENT IN TRADE-UNIONS DURING EACH MONTH, 1914 AND 1915.

Year.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1914.....	2.6	2.3	2.2	2.1	2.3	2.4	2.8	7.1	5.9	4.4	2.9	2.5
1915.....	1.0	1.6	1.3	1.2	1.2	1.0	.9	1.0	.9	.8	.6	.6

The mean annual percentage of unemployment for the year 1915 in British trade-unions was 1.1 as compared with 3.3 in 1914; 2.1 in 1913; 2.4 in 1912; 3 in 1911; and 4.7 in 1910.

Employment conditions in certain industries are reflected in the following table which shows the total number of establishments, number of employees, and total amount of wages paid during a representative week in December, 1915, and the per cent of increase or decrease in numbers employed and wages paid over in the corresponding week of November, 1915, and of December, 1914. These data of course relate to the same establishments in each period of time indicated; otherwise the comparison would be valueless. According to this table the number employed in this week of December, 1915, as compared with the corresponding week of December, 1914, was 0.3 per cent less, while the amount of wages paid to the same number of employees was 13.8 per cent greater.

NUMBER OF PERSONS EMPLOYED BY ESTABLISHMENTS REPORTING, AND WAGES PAID SUCH EMPLOYEES, FOR THE WEEK ENDING DECEMBER 18, 1915, COMPARED WITH DATA FOR THE CORRESPONDING WEEK OF NOVEMBER, 1915, AND OF DECEMBER, 1914.

Industry.	Number of persons em- ployed, third week of Decem- ber, 1915.	Per cent of increase or de- crease as compared with corresponding week of—				Total amount of wages paid.	Per cent of increase or de- crease as compared with corresponding week of—			
		November, 1915.		December, 1914.			November, 1915.		December, 1914.	
		In- crease.	De- crease.	In- crease.	De- crease.		In- crease.	De- crease.	In- crease.	De- crease.
Cotton.....	205,230	0.6	.....	1.6	.....	¹ \$1,058,493	1.3	.....	20.5	.....
Woolen.....	24,408	.3	.....	1.0	.....	¹ 135,464	2.1	.....	7.7	.....
Worsted.....	35,493	.....	0.6	.....	3.0	¹ 160,492	.....	0.2	9.3	.....
Linen.....	38,676	.3	.....	.....	7.6	131,683	4.8	.....	7.6	.....
Jute.....	14,674	.5	.....	4.2	.....	72,608	.7	.....	31.6	.....
Lace.....	7,968	.2	.....	2.1	.....	40,922	.6	.....	38.1	.....
Hosiery.....	23,417	.1	.....	4.2	.....	¹ 105,297	.....	1.3	12.8	.....
Other textiles.....	16,313	.....	.....	.....	4.1	69,825	2.0	.....	10.6	.....
Bleaching, dyeing, printing, and finish- ing.....	25,361	.....	.9	3.8	.....	¹ 191,657	1.2	.....	30.9	.....
Boots and shoes.....	62,174	.1	.....	.....	2.9	¹ 378,497	.2	.....	7.2	.....
Clothing, ready-made.....	36,137	.....	1.7	.....	2.0	153,270	.....	.4	.....	7.0
Shirts and collars.....	20,217	.1	.....	.....	.4	71,129	1.2	.....	9.5	.....
Brick.....	7,380	.....	2.0	.....	25.4	48,723	.....	6.2	.....	12.6
Cement.....	7,543	.....	1.1	.....	15.0	62,481	.....	3.4	.....	1.6
Food preparations.....	67,843	.1	.....	13.5	.....	346,996	.5	.....	27.1	.....
Printing.....	15,420	.....	.3	.....	11.1	115,948	.6	.....	.....	1.0
Bookbinding.....	10,283	.....	.3	.....	10.5	50,548	1.5	.....	4.5	.....
Glass.....	10,701	1.9	.....	.....	9.0	83,441	1.8	.....	4.1	.....
Pottery.....	17,666	.2	.....	.....	2.9	91,675	.....	.8	16.2	.....
Total.....	646,904	.1	.....	.....	.3	3,369,141	.7	.....	13.8	.....

¹ The comparison of wages with December, 1914, is affected by war bonuses.

LEGAL REGULATION OF PUBLIC EMPLOYMENT OFFICES IN AUSTRIA.

Public employment bureaus have been the subject of both actual and proposed legal regulation in Germany and Austria somewhat recently, presumably in order to coordinate their work and to make it more effective to meet the increased burden which will be placed upon these offices at the close of the war when the disbanded soldiery return to their industrial pursuits.

The October number of the REVIEW noted that all public employment offices in Germany have been required to make reports of their activities to the Imperial Statistical Office. In June, 1915,¹ the directors of the National Federation of Public Employment Offices in Austria submitted regulations for the conduct of employment agencies for enactment into law. These regulations, if given the force of law by the Government, provide for the discontinuance of private employment agencies conducted for profit.

¹ Der Arbeitsnachweis, Vienna, 1915, vol. 9, No. 5, pp. 373-et seq.

The principles laid down by these regulations included the following points:

(1) The establishment of public employment bureaus for all kinds of labor and classes of workers, where provision has not already been made for such by provincial or State legislation; (2) compulsory establishment of employment bureaus by municipalities having 15,000 inhabitants and over; (3) the establishment of registry offices by the central employment bureau created for each Province, in those localities in which the military authority engaged in demobilizing the forces is located, provided a public employment bureau does not already exist there; (4) the establishment in Vienna of a special employment bureau for the placing of migratory agricultural workers; (5) the creation of advisory councils of technical experts in connection with a general system of exchanges; (6) acceptance of the principle of free service, excepting a small Government fee; (7) cost and maintenance of the bureaus to be borne jointly by the municipalities, the Province and the State; (8) exemption of the offices from the payment of telephone and telegraph fees and postage, or their refund by the State; and (9) exemption from payment of all direct taxes. The exemption from the payment of telephone fees, etc., and from all direct taxes is also to be made applicable to existing public welfare employment bureaus, i. e., those not conducted for profit.

A marked feature of the proposed legislation is that provision which grants free transportation by the State and provincial railroads to applicants for employment to the place of work, and if, without their fault, no work is secured, free transportation, either returning or to some other locality, is to be granted.

OFFICIAL REPORTS RELATING TO LABOR.

UNITED STATES.

Illinois.—Department of Factory Inspection. Twenty-second annual report of the chief State factory inspector of Illinois, for the year July 1, 1914, to June 30, 1915. Springfield, 1915. 235 pp.

A detailed report of the work of the factory inspection department containing the results of inspection under the factory law; child labor law; health, safety, and comfort law; washhouse law; blower law; structural law; women's 10-hour law; garment law; and ice cream law. Attention is also called to the work of the department under the occupational-disease law, which was drawn as the result of the report of the committee for the investigation of industrial diseases in 1910. This law provides in general for the protection of certain workers engaged in occupations considered particularly hazardous, and safeguards the worker by compelling the employer to make medical examinations of his employees, to install adequate washing facilities, to provide places apart from the workroom where the employee may take his meals, to furnish proper working clothing for his workmen and to safeguard them from poisonous fumes, dust, and gases by means of adequate methods of ventilation. During the year the medical inspectors of the State department in enforcing the provisions of this law made 264 inspections in 165 establishments in 26 cities and towns, not including Chicago. In Chicago they made 331 inspections in 192 establishments. The following table presents a general summary of reports under the occupational-disease law:

NUMBER OF CASES OF OCCUPATIONAL DISEASES REPORTED, BY INDUSTRIES, FOR EACH MONTH, JULY 1, 1914, TO JUNE 30, 1915.

Industry.	Num-ber of firms re- port- ing.	Number of employees reported for—											
		July.		August.		September.		October.		November.		December.	
		Sick.	Well.	Sick.	Well.	Sick.	Well.	Sick.	Well.	Sick.	Well.	Sick.	Well.
LEAD POISONING.													
White lead.....	4	1	313	1	296	.....	292	1	292	.....	394	2	315
Smelting and refining.....	29	18	2,629	14	2,674	13	2,668	11	2,180	13	2,537	18	2,781
Manufacture of paints.....	24	.....	346	.....	333	.....	337	.....	341	.....	321	2	334
Manufacture of storage batteries.....	10	.....	183	.....	131	2	132	.....	168	.....	133	.....	141
Manufactures of tinware...	3	18	342	.....	394	.....	413	1	289	2	239	1	227
Manufacture of car seats and bearings.....	4	.....	269	.....	269	.....	206	.....	259	2	199	.....	199
Telephone and switch- boards.....	2	.....	39	.....	42	.....	41	.....	39	.....	34	.....	37
Painting.....	56	.....	1,669	1	1,515	.....	1,320	.....	1,402	.....	1,369	.....	1,307
Electrotyping.....	2	.....	58	.....	65	.....	39	.....	50	.....	5	1	59
Wall paper and oilcloth....	3	.....	22	.....	21	.....	22	.....	22	.....	16	.....	20
Enameling.....	4	.....	333	.....	334	.....	331	.....	174	.....	346	.....	341
Total.....	141	37	6,203	16	6,074	15	5,801	13	5,216	17	5,593	24	5,761
OTHER POISONING.													
Arsenic, paris green, etc...	2	.....	53	.....	51	.....	48	.....	43	.....	53	.....	52
Brass foundries.....	58	1	1,844	2	2,125	1	2,104	2	2,059	1	1,914	2	1,930
Spinners, polishers, etc....	36	.....	819	.....	735	.....	774	.....	830	.....	792	.....	795
Plating and electroplating.	16	.....	203	.....	177	.....	187	.....	186	.....	166	.....	202
Decalcomania.....	1	.....	9	.....	11	1	11	.....	11	.....	13	.....	11
Galvanizing.....	3	.....	41	.....	38	.....	39	.....	37	.....	34	.....	32
Total.....	116	1	2,969	2	3,137	2	3,163	2	3,166	1	2,972	2	3,022
All causes.....	257	38	9,172	18	9,211	17	8,964	15	8,382	18	8,565	26	8,783

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NUMBER OF CASES OF OCCUPATIONAL DISEASES REPORTED, BY INDUSTRIES, FOR EACH MONTH, JULY 1, 1914, TO JUNE 30, 1915—Concluded.

Industry.	Num-ber of firms re- port- ing.	Number of employees reported for—											
		January.		February.		March.		April.		May.		June.	
		Sick.	Well.	Sick.	Well.	Sick.	Well.	Sick.	Well.	Sick.	Well.	Sick.	Well.
LEAD POISONING.													
White lead.....	4	.....	380	.....	300	.....	379	.....	352	1	364	.....	395
Smelting and refining.....	29	12	2,390	17	2,711	5	2,577	5	2,721	5	2,548	5	2,854
Manufacture of paints.....	24	1	337	1	316	.....	314	.....	326	.....	360	.....	373
Manufacture of storage batteries.....	10	.....	133	.....	105	.....	129	.....	186	.....	197	1	201
Manufacture of tinware....	3	1	218	1	220	.....	244	2	219	.....	267	2	269
Manufacture of car seats and bearings.....	4	.....	149	2	149	.....	157	1	198	.....	26	1	193
Telephone and switch-boards.....	2	.....	37	.....	37	.....	37	.....	37	.....	37	.....	37
Painting.....	56	.....	1,509	.....	1,226	2	1,425	3	1,186	3	1,224	2	1,526
Electrotyping.....	2	.....	58	.....	41	.....	67	.....	23	.....	76	.....	80
Wall paper and oilcloth....	3	.....	22	.....	21	.....	23	.....	19	.....	21	.....	22
Enameling.....	4	.....	328	.....	317	.....	315	1	301	.....	311	.....	151
Total.....	141	14	5,561	21	5,443	7	5,667	12	5,568	9	5,431	11	6,091
OTHER POISONING.													
Arsenic, Paris green, etc....	2	.....	56	.....	60	1	66	.....	74	.....	85	.....	81
Brass foundries.....	58	2	1,762	.....	1,611	.....	1,829	.....	1,868	1	1,948	.....	1,964
Spinners, polishers, etc....	36	.....	689	.....	679	.....	719	.....	699	.....	684	1	643
Plating and electroplating.	16	.....	187	.....	146	.....	175	.....	169	.....	190	.....	156
Decalcomania.....	1	.....	10	.....	9	.....	7	.....	10	.....	7	.....	6
Galvanizing.....	3	.....	34	.....	45	.....	37	.....	36	.....	25	.....	38
Total.....	116	2	2,738	.....	2,550	1	2,833	.....	2,856	1	2,939	1	2,888
All causes.....	257	16	8,299	21	7,993	8	8,500	12	8,424	10	8,370	12	8,979

Under the various laws enforced by the inspection department, 485 convictions were secured in the course of the fiscal year with fines and costs amounting to \$7,114.40. Of this number of convictions 280 were obtained in the municipal courts of Chicago, with fines and costs amounting to \$4,192.75.

The number of children under 16 years of age employed in 1913-14 was reported as 12,610, in 1914-15 as 5,805. Of this latter number 4,854 were employed in Chicago.

Illinois.—*Industrial Board. Second annual report, June 30, 1915. Springfield, 1915. 39 pp.*

This constitutes the report of the administrative body under the workmen's compensation act of Illinois, and a summary of it will be found in a future number of the REVIEW.

——— *State Board of Arbitration. Report, March 1, 1915. Chicago, 1915. 52 pp.*

This volume gives the history of various labor disputes occurring in the State during 1914, and of the proceedings in those in which the board was called upon to institute arbitration processes, and the results of such interventions, together with resulting agreements entered into. No statistical or text summary is presented. The Federal and the Illinois arbitration laws are reproduced.

Kansas.—*Department of Labor and Industry. Thirtieth annual report, 1914. Topeka, 1915. 328 pp., folder.*

The activities of the bureau were broadened in scope during this year as the result of newly enacted laws. The work of inspection and law enforcement has been continued under more favorable conditions and with a greater degree of satisfaction than in former years, it is stated.

Special investigation has been made into the working conditions of women and children, and data collected in reference to wages and hours of labor in 25 towns, 365 establishments, and 27 different occupations, and applying to 10,854 women, showing the following results: 34 per cent received less than \$6 a week, 50 per cent, \$7 or less a week; 21 per cent worked 10 or more hours a day, and 50 per cent worked 54 hours or longer per week.

It is estimated that more than 50,000 women are employed in the industries within the State, and that 10 years ago 10 per cent of the wage earners in factories, workshop, and like establishments were under 16 years of age, while the records for 1914 show that of 40,658 wage earners in inspected factories, only 114, or about one-fourth of 1 per cent, were under that age.

Classified weekly wages for the more important industries; directory and statistics of labor organizations in the State; and proceedings of the seventh annual convention of the Federation (State) of Labor are set forth. The current miners' contract is reproduced. Decisions of the Kansas Supreme Court under the workmen's compensation act, suits to enforce contracts, and under laborers' and material men's liens are reported.

During the year 1,743 industrial establishments, employing 40,658 persons, were inspected, approximately 500 buildings examined under the fire-escape law, and 1,000 recommendations made, resulting in improved conditions, declares the report.

The following is abstracted from the chapter "Manufacturing and Industrial Statistics":

COMPARATIVE SUMMARY OF MANUFACTURING STATISTICS FOR THE YEARS 1909, 1913, AND 1914, WITH PER CENT OF INCREASE.

Item.	1909	1913	1914	Per cent increase.	
				1914 over 1913.	1914 over 1909.
Number of establishments.....	1,918	1,662	1,938	16.61	1.04
Capital invested.....	\$141,354,877.00	\$174,608,465.59	\$174,935,237.82	.19	23.76
Number of salaried officials, clerks, etc..	6,148	6,362	8,036	26.31	30.71
Salaries.....	\$6,098,368.00	\$7,082,938.93	\$8,611,545.87	21.58	41.21
Average number of wage earners.....	51,628	54,439	51,697	¹ 5.04	.13
Total wages.....	\$31,338,827.00	\$34,328,555.40	\$34,214,713.57	¹ .33	9.18
Miscellaneous expenses.....	\$12,118,765.00	\$15,056,082.43	\$17,805,205.98	18.26	46.92
Cost of material used.....	201,521,096.00	230,564,609.93	241,125,048.34	4.58	19.65
Value of products, including custom work and repairing.....	264,133,757.00	318,536,748.68	328,936,964.85	3.26	24.53

¹ Decrease.

A table in detail shows the number of serious accidents occurring during the year, wages paid, injury received, length of disability, amount of compensation paid in reference to each injury. There were reported during the year 3,641 accidents, of which 57 were fatal, 806 serious (2 weeks or more duration), and 2,778 less serious.

Exclusive of harvest hands the free employment bureau reports 1,784 applications for situations, 940 vacant positions registered, and places secured for 833 persons.

As to coal-mine inspection, see the REVIEW for December, 1915, page 73.

Maryland.—*Bureau of Statistics and Information, 1914. Twenty-third annual report. Baltimore, 1915. 273 pp.*

The larger part of this report relates to the extent of child labor in the State. Tables are given showing age, nationality, sex, height, and other physical data concerning children to whom certificates of employment were issued during the year; class of

employment secured; length of service; cause of leaving; weekly wages by industries; results of medical examinations; reported occupational diseases; effect of certain employments on physique of the children; children on the stage; factory inspection; and home workers. There is also given the results of a special study of conditions in 15 industries employing the largest number of children.

It is reported that 2,130 children were working in violation of the law. There were secured, however, only 33 prosecutions and 26 convictions. There were nearly 13,000 positions filled by children under 16 years of age, and 15,181 applications for certificates under the child labor law were made in Baltimore City alone. Throughout the State 12,494 such certificates were issued, and in addition thereto 2,249 boys between 10 and 16 years of age were granted street trades licenses.

Massachusetts.—*Bureau of Statistics. Forty-sixth annual report on the statistics of labor for the year 1915. Boston, 1915.*

The matter presented in this volume consists of nine separates issued by the bureau during the course of the fiscal year ending December 1, 1915, in the form of numbered bulletins (Nos. 104–112) according to a practice established in 1913. These bulletins, for the most part, have been listed as received by the MONTHLY REVIEW, their title and number of the REVIEW in which they appear being as follows: Handbook of labor laws of Massachusetts, 1914; Sixth annual report on labor organizations, 1913 (September, 1915, p. 60); Fourteenth annual directory of labor organizations in Massachusetts, 1915 (October, 1915, p. 87); Fifth annual report on union scale of wages and hours of labor in Massachusetts, 1914 (October, 1915, p. 87); Immigrant aliens destined for and emigrant aliens departing from Massachusetts, 1914 (September, 1915, p. 60); Wages and hours of labor in the manufacture of paper products in Massachusetts (March, 1916. See below); Labor legislation in Massachusetts, 1915 (December, 1915, p. 74); Labor bibliography, 1914 (January, 1916, p. 63); Seventh annual report on labor organizations, 1914 (January, 1916, p. 64).

————— *Wages and hours of labor in the manufacture of paper products in Massachusetts. 1915. 146 pp. (Labor Bulletin No. 109, Part VI of the annual report on the statistics of labor, 1915.)*

For the three groups of industries considered collectively the average weekly earnings of the 4,848 male wage earners employed in the different establishments, regardless of occupation or time worked, were found to be \$13.04 as compared with the average of \$13.30 for the 57 per cent of these mill employees who earned full-time pay during the representative week for which pay rolls were copied. The corresponding average for 7,249 female employees, 43.9 per cent of whom worked full time, were \$7.37 a week for all females as compared with \$7.59 for those working full time. These average earnings included the wages of 1,542 children under 16 years of age. Eliminating the data for these latter, the average weekly earnings of all males 16 years of age and over was \$13.63, which was greater by 59 cents than the corresponding rate for all males, while the average earnings of females 16 years of age and over was \$7.80, which was greater by 43 cents than the corresponding rate for all females.

“Although the so-called 54-hour law is legally applicable only to the employment of women and minors in manufacturing and mercantile establishments, it has, nevertheless, effected a corresponding reduction in the hours of labor of men in many of the establishments in which both men and women are employed, thus establishing the 54-hour schedule as a standard working week for men as well as for women” (p. 42).

————— *District Police. Report for the year ending October 31, 1915, including the detective, building inspection, and boiler inspection departments. Boston, 1915. 274 pp.*

New York—NEW YORK CITY.—*Department of Education. Seventeenth annual report of the City superintendent of the schools, 1914-15. New York, 1916. 4 vols.:*

——— *Report on evening schools for the year ended July 31, 1915. Presented to the Board of Education October 27, 1915. 115 pp., plates.*

——— *Recreation centers, vacation schools, vacation playgrounds. Presented November 10, 1915. 85 pp., plates.*

——— *Preparation for trades: Manhattan trade school for girls; Vocational school for boys; Murray Hill vocational school for boys. Presented November 24, 1915. 99 pp., plates.*

——— *Survey of the Gary and prevocational schools. Presented January 26, 1916. 61 pp.*

Concerning the last-named investigation the superintendent in his letter of transmittal to the board of education declared that "the results show that, of the three types, the traditional schools made the best showing, the 'prevocational' schools stood second, and the Gary schools stood third" in a test made as to the academic knowledge of the pupils.

Ohio.—*Industrial Commission. Division of Mines. Fortieth annual mine report for the year ending December 31, 1914. Columbus, 1915. 413 pp.*

The State of Ohio, according to this report, produced 18,736,407 tons of coal in 1914 as compared with 36,285,406 tons in 1913; the average number of miners for the year decreased from 48,420 to 46,965, or the lowest in any year since 1906; the average number of days worked by pick miners fell from 189 to 150, and of machine miners from 206 to 150.

Accidents in coal mines, it is reported, caused the death of 58 persons during the year, or one for every 813 persons employed, as compared with one for every 299 persons employed in 1913. Taking all deaths caused by accidents reported during the year 1914, or 61, 3 of which occurred as the result of accidents met with in 1913, falls of roof and coal were accountable for 44 deaths; mine cars, 7; motors, 3; explosions of gas, 1; explosion of powder, 1; electricity, 1; mining machine, 1; and miscellaneous, 3.

During the year 1914 there were reported 24 violations of the mining law, resulting in prosecutions. The most serious violations reported were those for removing and going beyond a danger signal.

The report contains information in some detail, concerning measures of safety, mining laws and legislation, coal production, coal mine inspection, etc. Part II is a detailed report of the deputy mine inspectors for their respective districts; and Part III contains a directory of coal companies by counties.

——— *Financial statement of the State insurance fund on November 15, 1915. Columbus, 1915. 4 pp.*

This report will be found summarized elsewhere in this issue of the MONTHLY REVIEW in connection with a digest of recent reports relating to workmen's compensation. (See p. 53.)

Oregon—PORTLAND.—*Department of Public Works. Report on the problem of unemployed during the winter 1914-15. [Portland.] 18 pp.*

This pamphlet reports the experience of the Citizen's Employment Committee in caring for the unemployed men in the city of Portland, during the winter 1914-15. The city spent \$75,000, it is stated, in an endeavor to cope with unemployment. Timber was purchased on stumpage contract and three wood-cutting camps were established, furnishing employment to 902 men, for an aggregate of 11,752 days, for which wages were paid in cash amounting to \$6,462.58, and meals furnished to the value of \$7,416.93. The total expenditures in the project amounted to \$33,253.83. The public utilities commission gave 822½ days employment at \$3 per day to men having large families.

At a temporary city lodging house, 1,392 men were provided with quarters, and employment furnished in cutting cordwood, at \$1 per cord. The equipment and operations, etc., purchase of logs and rent amounted to \$9,609.16.

Virginia.—*Bureau of Labor and Industrial Statistics. Eighteenth annual report, 1915. Richmond, 1915. 190 pp.*

Statistical data relative to value of product, wages paid, and capital invested; also, average monthly pay of office help, and average daily wages of skilled and unskilled employees in the various industries in the State.

The summary shows that in 1913 the value of production was \$213,530,858 while in 1914 the value was \$212,416,996, including \$19,031,305 for industries not reported in 1913.

Accidents to employees are reported as follows:

Electric railways: Killed, 4; injured, 70; steam railroads: Killed, 61; injured, 3,139; in coal mines 43 fatal and 538 nonfatal accidents. In the section on inspection of factories the conditions observed in the various manufacturing and mercantile establishments are reported. Under the title, "Enforcement of Labor Laws" a record of each prosecution is given.

West Virginia.—*Department of Mines. Annual report, 1914. [Charleston, 1915]. 336, viii pp.*

This is the thirty-first annual report of the department upon the conditions of coal mines. It gives detailed statistics of coal mining and coke manufacturing, including accidents, strikes, wages, inspections, and visits made to mines. The report contains a directory of the mines of the State. In the chapter on accidents comparative data are given for the period 1883 to June 30, 1914, by year and by causes.

The following table of data summarizes the results of coal mine operations for the fiscal years 1913 and 1914:

NUMBER OF COAL MINES IN OPERATION, OUTPUT, AND VALUE OF COAL MINED; TONS OF COKE PRODUCED; DAYS OF OPERATIONS; INJURIES AND DEATHS CAUSED BY ACCIDENTS, 1913 AND 1914.

[Ton—2,240 pounds.]

	1913	1914		1913	1914
Tons of pick-mined coal ¹ ...	26,134,552	29,541,498	mines ¹ and coke ovens...		
Tons of machine-mined coal ¹ ...	33,335,800	35,941,500	Number killed.....	308	541
Total coal mined.....	61,470,352	65,483,088	Number injured, nonfatally.....	668	870
Tons from small mines ² ...	300,000	300,000	Number employed per fatality.....	228	144
Tons from all mines.....	61,770,352	65,783,088	Number employed per injured.....	105	90
Coal converted into coke...	3,763,077	2,907,434	Tons mined ¹ per fatality...	199,579	121,041
Tons ³ of coke manufactured.....	2,521,800	1,957,401	Tons mined ¹ per injured...	92,021	75,208
Value of coal at mines.....	\$61,132,648	\$65,783,088	Number of wives widowed...	132	206
Value of coke at ovens.....	\$4,791,520	\$3,914,802	Number of children orphaned.....	299	621
Value of coal at mines (per ton).....	\$0.99	\$1.00	Acres of coal worked out...	11,183	10,100
Value of coke at ovens (per ton).....	\$1.90	\$2.00	Tons produced per miner ¹ ...	1,709	1,549
Mining machines in use...	2,393	2,467	Average annual earnings per pick miner.....	\$737.62	\$726.67
Average coke ovens in use...	8,393	5,902	Average monthly earnings per pick miner.....	\$61.47	\$60.56
Days mines in operation...	220	220	Average mining cost per ton (run of mine).....	\$0.48	\$0.49
Days ovens in operation...	255	252			
Pick miners employed ¹ ...	18,320	19,924			
Machine operators and miners ¹	21,803	26,684			

¹ Commercial mines.

² Estimated.

³ 2,000 pounds.

Wisconsin.—Industrial Commission. *Report on allied functions for the year ending June 30, 1915. Madison, 1915. 51 pp.*

Contains record of the activities of the Industrial Commission of Wisconsin during the fiscal year 1915.

Safety in factories is secured by the commission by close cooperation with employers and employees, and orders are drawn up on the basis of the practical experience of these parties in interest. Thus, after six months spent in investigation by such a representative committee, 25 orders on safety and sanitation in zinc mines were issued in January. In a similar manner committees are at work drafting orders covering electric hazards, additional orders on safety and sanitation for factories for the guarding of machinery, etc., and orders covering safety in the logging industry. The commission has begun to make use of moving pictures in its educational campaign for safety.

In the work of inspection 2,879 establishments were visited during the fiscal year and 3,991 inspections were made. In 45 per cent of these establishments violations of safety orders were found and ordered corrected. During the preceding year violation of safety orders were found in 64 per cent of the 2,658 places inspected. As the building inspection code has been operative only since October 15, 1914, the work of the commission in connection therewith has been largely educative. This has been accomplished through conferences, by the drafting of short building ordinances suitable for adoption by cities, and by the use of pamphlets on fire protection in the schools.

The activities of the commission in relation to workmen's compensation were reviewed in a preceding number of the Review (January, 1916, pp. 53-62.)

Many men looking for work and few positions to be found was the general condition of the labor market during the first 10 months of the fiscal year ended June 30, 1915. During the spring months the increased activity of manufacturing industries, and outside construction work relieved the situation to some extent. The existence of a real farm-help problem and an unusual dearth of employment in the cities brought about an aggressive movement by the free employment office to encourage the unemployed of the cities to accept work on the farms, and with the assistance of country banks and the long-distance telephone much has been accomplished in this field. In the year ending June 30, 1914, 1,408 farm hands were sent to different localities. Figures for the last year show that farmers asked for 3,572 men, and 2,035 applicants for farm work secured employment. The report states that the employment officials are very careful in choosing only men who are able to "make good" for farm vacancies and the farmers are beginning to place confidence in the judgment of free employment offices. The following table shows the result of the operation of free employment offices for the fiscal year ending June 30, 1915, as compared with the preceding fiscal year.

OPERATIONS OF THE WISCONSIN FREE PUBLIC EMPLOYMENT OFFICES, 1914-15 COMPARED WITH 1913-14.

Item.	Males.		Females.		Total.	
	1913-14	1914-15	1913-14	1914-15	1913-14	1914-15
Employers' orders.....	13, 113	10, 722	9, 043	9, 691	22, 156	20, 413
Applicants for work.....	42, 494	39, 242	9, 495	13, 326	51, 989	52, 568
Help wanted.....	33, 209	20, 811	9, 892	10, 284	43, 101	31, 095
Referred to positions.....	32, 300	20, 575	10, 029	12, 114	42, 329	32, 689
Positions secured.....	19, 651	15, 389	5, 276	6, 840	24, 927	22, 229

Regarding private employment offices, the commission proposes to inspect these during the coming year in order to insure full compliance with the law on their part. A system is being devised for regular reports by these offices to the commission.

The work of the commission in relation to woman and child labor has been largely routine work, it is stated, in inspecting work places where these are employed and in interesting employers with a view to a larger and more practical understanding of industrial welfare in behalf of these workers.

Among other matters reported upon by the commission were those concerning boiler inspection, enforcement of the minimum wage law, compulsory school attendance law, and the apprenticeship law of 1911. This latter law is declared to have been a failure, and as the result of inquiries by the commission an amended law was secured in 1915 which gives the industrial commission power to make regulations for the different trades and industries.

Bakeries and confectioneries to the number of 4,513 were inspected during the year and 1,248 were found unclean.

The arbitration functions of the commission were practically dormant during the year, the absence of serious strife, it is suggested, being due to the prevailing state of unemployment throughout Wisconsin.

Only 11 prosecutions for violation of the law were found necessary, 2 cases of violation of the sanitation law, 5 of violation of the woman labor laws, and 4 of violation of child labor laws.

The total expenditures of the commission for the fiscal year ending June 30, 1915, were \$106,240.74, as compared with \$104,973.04 for the preceding fiscal year.

United States.—*Association of Governmental Labor Officials of the United States and Canada. Proceedings, second annual convention, Detroit, Mich., June 28–July 1, 1915. Kansas City, Mo. 118, [2] pp.*

Prior to 1914 the two associations, the International Association of Factory Inspectors and the International Association of Labor Commissioners, had maintained separate existence, the former since 1887 and the latter since 1885; but in June, 1914, at a joint meeting of the associations at Nashville, Tenn., the two by mutual agreement went out of existence and reorganized themselves into a new association called "The Association of Governmental Labor Officials of the United States and Canada." The joint meeting of 1914 from June 8 to 12 continued after the amalgamation as the first annual convention of the newly organized association.

The proceedings here listed constitute those of the second annual convention held at Detroit, Mich. Among the topics discussed were the following: Cooperation in the enforcement of labor legislation; need of the extension of continuation schools; national child labor; elimination of dust, noxious fumes, excessive heat, etc., from factories; administration of industrial laws; public employment offices; factory inspection laws, etc.; factory inspection and labor conditions in the South; industrial hygiene; industrial progress in New England; need and benefit of industrial hygiene; need of women factory inspectors; and the work of the United States Department of Labor.

— *Bureau of Education. Report of the Commissioner of education for the year ending June 30, 1915. Washington, 1915. 2 vols.*

Chapter 9 of volume I of this report consists of a survey of the present status and tendencies in vocational education in the United States, written by the specialist in industrial education of the bureau.

"The intensity of popular interest, the increasing numbers of those who seek definite suggestions for specific purposes, the eagerness with which information is sought, and the magnitude of the physical proportions of the movement [for vocational education]

as manifested in legislation and in the creation and extension of schools to meet newly conceived needs—all of these grow steadily and rapidly more impressive." (p. 221.)

United States.—*Bureau of Foreign and Domestic Commerce. (Department of Commerce.) The hosiery industry: Report on the cost of production of hosiery in the United States. Washington, 1915. 258 pp. (Miscellaneous Series, No. 31.)*

This is the second of a series of reports to be issued by the Bureau of Foreign and Domestic Commerce concerning the cost of production in different branches of the clothing industry. The report contains information concerning cost of production, imports and exports, working conditions, factory equipment, selling methods, and other trade conditions in connection with the hosiery industry, together with some practical suggestions with regard to efficient factory management based on interviews with manufacturers and on the personal observations of the special agents of the bureau. Attention is called to that chapter which gives a description of the principal processes of hosiery manufacture.

In 1909 the hosiery and knit goods industry, considered on the basis of value of production, ranked thirtieth in importance among the industries of the United States. It is widely distributed, not less than 38 States having at least one such manufacturing establishment. The value of hosiery manufactured in the United States in 1909 is reported at \$68,721,825, of which cotton hosiery was valued at \$55,909,987. The importation of cotton hosiery for the fiscal year 1909 was \$6,390,923, or 11.43 per cent of the value of domestic production, while in 1914 such importation amounted to \$2,949,678, or 5.28 per cent of domestic production.

Reports were secured from 73 establishments located in 16 States. Their sales during the last business period, usually a year, aggregated \$27,010,893. The capital invested amounted to \$15,548,885, and employed during the busy season 4,620 males and 12,424 females, a total of 17,044 persons 16 years of age or over, and 466 males and 984 females under 16 years of age, making a total of 18,494 employees, of whom 7.85 per cent were under 16 years of age. Females constitute a large portion of the employees in hosiery mills. The piece-price system prevails, and is generally preferred by both employees and employers.

As to average cost of production the percentage expended for various items was as follows for all 73 establishments: Raw material, 53 per cent; direct labor, 25; indirect labor, 4; factory expense, 6; administrative expense, 3; and selling expense, 9.

Manufacturers north of Mason and Dixon's line complain that the rapid development of the hosiery industry in the South is making serious inroads on their business, and that it is hard for them to meet the competition of the southern mills, because in these mills wages are lower, working hours longer, and younger children employed than in northern factories, and workmen's compensation acts have not been passed in Southern States.

Chapter VI (pp. 195–217) of the report presents further details of working conditions, distribution of employees engaged in the different classes of establishments, wages, and hours of labor. These data were drawn for the most part from Bulletin No. 177 of the Bureau of Labor Statistics relating to wages and hours of labor in the hosiery and underwear industry, 1907 to 1914.

Pages 237 to 253 are devoted to suggestions for increasing foreign trade with various countries.

————— *The knit underwear industry: Report on the cost of production of knit underwear in the United States. Washington, 1915. 217 pp. (Miscellaneous Series, No. 32.)*

This is the third of a series of reports to be issued by the Bureau of Foreign and Domestic Commerce concerning the cost of production in different branches of the clothing industry. The report contains information concerning the cost of produc-

tion, imports and exports, working conditions, factory equipments, selling methods, and other trade conditions of interest in connection with the knit underwear industry, together with some practical suggestions with regard to efficient factory management, based on interviews with manufacturers and on the personal observations of the special agents of the bureau.

According to the census of manufacturers the value of knit underwear produced in the United States in 1909 was \$84,446,353. In the fiscal year 1914 the imports of all cotton knit goods except hosiery, gloves, and mittens amounted to \$341,973, or 0.57 per cent of the production in 1909, and it is estimated that this percentage would be even lower if the imports in 1914 were compared with the domestic production in that year. The exports of knit goods and hosiery increased from \$1,016,325 in the fiscal year 1909 to \$2,544,822 in the fiscal year 1914, or over 150 per cent.

In the investigation reports were secured from 63 establishments located in 13 States said to be fairly representative of the industry. Their sales during the last business period, usually a year, amounted to \$26,693,778.

Concerning employees and wages in the industry the following summary is quoted from page 44 of the report:

"In most establishments the busy season includes the months of April, May, and June, and the full months are July, August, and December. The total number of employees in the 63 establishments reporting was 15,081 during the busy season, of whom 344, or 2.20 per cent, were under 16 years of age.

"The average number of employees 16 years of age and over during the busy season was: Males, 69.5; females, 167.6; total, 237.1. The average in the dull season was: Males, 67.1; females, 160.7; total, 227.8; a falling off of only 9.3, or 3.96 per cent.

"Of the establishments in the first four groups, including mills that buy all of their yarns, those in Group III, which includes mills in the Southern States, show the largest average number of employees.

"The whole number (not the average) of children under 16 years of age employed in the 63 establishments was 68 males and 276 females during the busy season and 57 males and 235 females during the dull season.

"Females constitute a large proportion of the employees in knit underwear mills. Most of the labor in such mills is paid for on the piece-price basis, which is preferred by both employer and employee."

The percentage distribution of the average cost of production for the 63 establishments, based on the total manufacturing and selling expense, was as follows, according to items of expense: Raw material, 61 per cent; direct labor, 21; indirect labor, 3; factory expense, 5; administrative expense, 3; and selling expense, 7.

Chapter VI of the report (pp. 176-195) presents further details as to working conditions in the industry, the number and distribution of employees, their earnings and hours of work as gathered from Bulletin No. 177 of the Bureau of Labor Statistics. Chapter V contains a description in some detail of the processes and occupations recognized in the industry.

United States.—*Navigation laws: Comparative study of principal features of the laws of the United States, Great Britain, Germany, Norway, France, and Japan. Washington, 1916. 190 pp. (Special Agents Series No. 114).*

This volume is a comparative analysis of the navigation laws of the leading maritime countries, namely, United States, Great Britain, Germany, Norway, France, and Japan. "This analysis is believed to be the first of its kind published in this country and is designed to meet the present urgent need for adequate official information on the subjects covered."

Among the features of the laws analyzed in this study are those provisions relating to the hours of labor of seamen, to provisions of the wage contract and conditions sur-

rounding the health and hygiene of seamen, regulations concerning the number of the crew and its nationality, their general disposition and treatment by the shipper. The provisions of the law are classified primarily according to subject matter, with sub-classification according to country. Three principal group classifications have been adopted: (1) Laws affecting the vessel; (2) laws affecting officers and crews; (3) administration of navigation laws.

The Bureau of Foreign and Domestic Commerce in the preparation of the report had the cooperation of the Commissioner of Navigation and of the Supervising Inspector General of the Steamboat-Inspection Service.

United States.—Civil Service Commission. *Thirty-second annual report for the fiscal year ended June 30, 1915. Washington, 1915. 211 pp.*

"The Government is doing more work with fewer employees and with increased economy and efficiency" is the verdict of the Civil Service Commission in the report listed here. On June 30, 1915, there were 476,363 officers and employees in the executive civil service. Of this number 292,296 were employees who held their positions by reason of competitive examinations; 10,690 were presidential appointees; 5,292, clerks in charge of contract postal stations; 72,000, clerks in third and fourth class post offices and consequently selected by the local postmasters; 8,098, mail messengers; 12,129, star-route, steamboat, and screen-wagon contractors; 4,556, pension examining surgeons; 20,674, engaged on the Panama work chiefly as laborers and minor employees; 27,464, unclassified laborers; 204, temporary employees of the Census; and the remaining 22,960 were either excepted from examination or subject to noncompetitive examinations.

Special attention is directed in the report to the securing of men for the valuation work of the Intersate Commerce Commission, with the statement that "the men engaged in the physical valuation of railroads constitute one of the most remarkable engineering forces ever assembled and their selection through competitive examination is a striking illustration of the efficiency of the merit system in meeting the demands of the public service." (Page 8.)

The table which follows may serve as a summary of the examination and appointment work of the commission for the two fiscal years, 1914 and 1915:

PERSONS EXAMINED AND APPOINTED UNDER THE CIVIL SERVICE DURING THE FISCAL YEARS 1914, 1915.

	Examined.		Appointed.	
	1915	1914	1915	1914
Under civil-service rules, original entrance:				
Field service.....	141,927	183,003	33,927	39,134
Departmental at Washington, D. C.....	24,100	13,609	1,914	2,072
Total.....	166,027	196,612	35,841	41,206
Promotions, transfers, and reinstatements through examination	1,137	1,487	557	729
Total under rules.....	167,164	198,099	36,398	41,935
Not under Federal civil-service act and rules:				
Philippine service.....	337	585	63	45
Under labor regulations.....	17,366	9,326	3,949	3,025
Total.....	184,867	208,010	40,410	45,005
Without further examination:				
Transfers and promotions.....			¹ 1,137	1,307
Reinstatements.....			1,327	1,647
Grand total.....	² 184,867	208,010	42,874	47,959

¹ These were transfers and promotions requiring certificate of the commission under the rules.

² In addition and upon appropriate official request the commission examined 1,587 applicants for admission to the District of Columbia service, the Military and Naval Academies, and the Federal Reserve Board.

Under the rules of the civil service prohibiting political activity, coercion, and discrimination administrative punishment was imposed during 1915 resulting in 64 removals or involuntary separation from the service, 4 reductions in grade, 27 suspensions without pay, and 56 warnings or reprimands. In this connection the commission asks that uniform and definite restrictions in the form of a civil-service rule be placed upon the political activity of unclassified and excepted officers and employees in the Government service.

As to Philippine appointments it appears that in 1902, 48 per cent were Filipinos, while in 1914 this proportion had increased to 94 per cent. "The appointment of Americans to clerical positions has practically ceased."

The problem of civil-service retirement the commission holds is intimately related to the efficiency of the service, and by no means the result of the merit system. Although civil-service rules have never protected incompetents, nevertheless "the improvement of methods and the proper adjustment of pay can not be effectively provided for until a retirement system is established which will make provision for this class of employees. The commission believes that a contributory plan is the only just and practicable one for the retirement of employees, and earnestly recommends its adoption at an early date."

United States.—*Federal Trade Commission. Annual report for the fiscal year ended June 30, 1915. Washington, 1915. 14 pp.*

The commission had been organized 16 weeks at the time of the issue of this report. The report is therefore only a brief statement concerning the organization of the commission and its staff, the employees of the former Bureau of Corporations of the Department of Commerce. The act creating the commission and that part of the antitrust, or so-called Clayton Act, as far as its enforcement lies with the commission, are appended.

——— *Interstate Commerce Commission. Accident Bulletin No. 55. Collisions, derailments, and other accidents resulting in injury to persons, equipment, or roadbed, arising from the operation of railways used in interstate commerce. January, February, March, 1915. Washington, 1915. 57 pp.*

Accidents occurring on interstate railways affecting passengers and employees of carriers have been reported quarterly by the commission since the act of May 6, 1910, came into effect, which required common carriers engaged in interstate and foreign commerce to make reports of all accidents to the commission, and which authorized investigation of accidents. There are reported all kinds of accidents to passengers, but accidents to employees resulting in injuries which do not prevent them from performing their accustomed services for more than three days in the aggregate during the 10 days immediately following the accident are not reported. Accidents to employees are reported separately for those on duty and those not on duty, and separately for those accidents occurring to railway employees other than trainmen on railway premises, which latter group of accidents are termed "industrial accidents," i. e., accidents not connected with train operation. No accident rates are presented as the number of employees is not reported. The bulletin contains data concerning accidents on electric railways and reports on railroad accidents specially investigated by the commission during the quarter in question.

During the first quarter, January, February, and March, 1915, the number of employees killed in "industrial accidents" was 79; the total number of employees killed by accident was 608; the number killed in coupling, 44; and the number killed in train accidents, 99.

——— *Surgeon General United States Army. Report to the Secretary of war, 1915. Washington, 1915. 306 pp.*

This report is here listed because of the data it contains concerning the medical examinations and occupations of recruits to American Army, who, it need hardly be said, are made up largely of the floating labor supply of the country. Thus, according

to this report, of 28,772 men who were accepted for first enlistment during the calendar year 1914, 10,190 or 35.4 per cent were ordinary laborers. For the five occupations which ranked first in importance the actual and relative numbers were as follows: Laborers, 10,190, or 35.4 per cent; farmers, 3,487, or 12.1 per cent; clerk and bookkeepers, 1,706, or 5.9 per cent; drivers and stablemen, 1,272, or 4.4 per cent; machinists, 1,018, or 3.5 per cent.

Of the total, 1,574 were colored, of whom 977, or 62.1 per cent, were classed as ordinary laborers.

During the year there were examined by the medical officers of the Army 57,244 recruits. This is the number of recruits it should be remembered, who have already passed a preliminary examination at the recruiting station, and this examination by the medical officers is a final and more thorough one. Of the number above, 6,102 were rejected for enlistment, 4,699 rejections or 77 per cent for physical causes and 1,403 or 23 per cent for causes not physical. Of the total rejected the largest proportion or 12.3 per cent, were rejected on account of venereal diseases; 9 per cent on account of diseases of the ear and defects of hearing, 6.8 per cent for defects of vision, 6.3 per cent for heart disease, 4.7 per cent on account of flat feet, and 3.6 per cent each on account of alcoholism and hernia.

The report contains much detailed data on the health and sanitary conditions of the Army for the year 1914 and a financial statement for the fiscal year ending June 30, 1915.

FOREIGN COUNTRIES.

Austria.—*Arbeitsstatistisches Amt im Handelsministerium. Die Arbeitseinstellungen und Aussperrungen in Oesterreich während des Jahres 1913. Vienna, 1914. 107 and 138 pp.*

This report on strikes in Austria during 1913 was published at the end of 1914, but only recently received by the bureau.

There are reported 438 strikes in 1913, which involved 1,024 establishments employing 88,150 workmen. Of this latter number 39,814 participated in the strikes, with a total loss of 409,353 working days. The strikes were generally of short duration. As to results from the point of view of the strikers 88 were completely successful, 193 partial successful, while 157 were without results. Demands in some way concerned with wages were the cause of 68.3 per cent of all strikes, while demands relating to organization were the next most frequent cause.

The number of lockouts during the year was 23, which involved 1,675 establishments employing 30,296 workers. Of these latter 75.3 per cent were locked out.

Denmark.—*Direktoratet for Arbejdsog Fabriktilsynet. Beretning om arbejdsog fabriktilsynets virksomhed i aaret 1914. Copenhagen, 1915. 46 pp.*

The present report embraces operations of the factory inspection department for the first year under the law of April 29, 1913, which became applicable December 1 of that year, as well as its activities in enforcing the bakery and steam boiler inspection law. The inspection department consists of a director, two office chiefs, a technical expert, a bookkeeper, and 18 district inspectors, together with one woman inspector, also a special inspector for bakeries, another for elevators, and a third for steam boilers. On January 1, 1914, 15,241 factories and workshops and 3,226 bakeries were subject to inspection; at the close of the year the number had increased to 17,590 and 3,227, respectively. Excluding the inspection of agricultural machinery and the like, 18,774 fixed industrial establishments were inspected during the year, involving 20,755 inspections, or an average of 111 for each 100 establishments, as compared with 98 inspections for each 100 establishments during the previous year. It should be noted that the municipalities maintain inspection divisions which are engaged in the inspection of dangerous machinery in their respective localities.

One hundred and thirty prosecutions for infractions of the factory law were maintained during the year, giving rise to fines amounting to 2,830 crowns (\$758). Under the factory law 107 prosecutions were conducted with resulting fines amounting to 1,914 crowns (\$513).

PERIODICAL PUBLICATIONS RELATING TO LABOR.

LABOR DEPARTMENTS AND BUREAUS.

Canada.—*The Labor Gazette, issued by the Department of Labor by order of Parliament. Ottawa.*

January, 1916.—Notes on current matters of industrial interest; Industrial and labor conditions, December, 1915; Proceedings under the industrial disputes investigation act, December, 1915; Industrial and labor conditions in Canada, 1915; Wholesale and retail prices, 1915; Reports of employment bureaus; Fair wages schedules in Government contracts; Trade disputes, 1915; Industrial accidents, December, 1915; Immigration, emigration, and colonization; Building permits, December, 1915; Reviews; Legal decisions affecting labor.

Denmark.—*Statistiske Efterretninger udgivet af det Statistiske Department. Copenhagen.*

December 28, 1915 (Vol. 7, No. 26).—Wages of servants and day workers in agriculture, 1915; Taxes on theaters, concerts, public shows, etc.; Unemployment, October, 1915; Retail prices, December, 1915; Insurance premiums paid in Denmark, 1910, 1914; Municipal relief funds, 1913-14 and 1914-15; Index number of the Economist.

January 20, 1916 (Vol. 8, No. 1).—Root crops, 1915; Electrical works in Denmark; Textile production, 1913; Retail prices, January, 1916.

Finland.—*Arbetsstatistisk Tidskrift utgifven af Industristyrelsen. Helsingfors.*

No. 6, 1915.—Changes in rates of wages, 1914 and 1915; Conditions of labor in the lumber industry; Public employment exchanges, third quarter, 1915; Proposed new workmen's compensation law in Sweden, 1915; Reports from foreign countries; Retail prices, third quarter, 1915.

France.—*Bulletin du Ministère du Travail et de la Prévoyance Sociale. Paris.*

September-October, 1915.—Social movement—France: Work of the mixed commissions in the departments for the adjustment of employment (continued); Employment in mines, September, 1915; Strikes and lockouts, September and October, 1915; National unemployment funds; Central office for placing the unemployed and refugees; Investigation of unemployment in certain occupations in Paris; State subsidies to employment bureaus, 1914; Operations of the National Old-age Retirement Fund, 1913; Economic situation expressed in index numbers, second quarter, 1915; Election of two of the members of the central minimum wage board. Foreign countries—Germany: Labor market, July, August, 1915; Employment offices; Cost of living in Berlin, August, September, 1915; Sickness insurance, 1913. Austria: Cost of living in Vienna, August, September, 1915. Trade-unions in Canada, 1914. United States: Immigration, 1914; Trade-unions in New York State, 1913; Strikes and lockouts, 1914. Great Britain: Labor market, strikes and employment exchanges, August-September, 1915; Cost of living, November 1, 1915; Strikes and lockouts, 1914. Sweden: Strikes and lockouts, 1913, 1914; Work of Government mediators, 1914. Miscellaneous: Reports of the industrial courts, third quarter, 1915; Wholesale prices in Paris, September, October, 1915; Foreign commerce of France, first six months, 1915; Production of sugar and alcohol; Prices of bread. Laws, decrees, court decisions, etc., on matters of interest to labor.

Germany.—*Reichs-Arbeitsblatt, herausgegeben vom Kaiserlichen Statistischen Amte, Abteilung für Arbeiterstatistik. Berlin.*

December, 1915.—Labor market in Germany, November, 1915; Labor market in foreign countries (Great Britain, Switzerland, Netherlands, France, New York, Australia); Employment offices and unemployment; Unemployment in German trade-unions, November, 1915; Unemployment in foreign countries (Austria, April to July, 1915, Netherlands, September, 1915); The trade-unions and the war; Miners' wages, first and second quarter, 1915; Labor disputes in Germany and Great Britain during the war (Sept. 1, 1914, to Aug. 31, 1915); Courses in elementary academic instruction for workmen in Germany; Decisions of industrial courts; Statistical tables of the labor market.

Great Britain.—*The Board of Trade Labor Gazette. London.*

January, 1916.—Employment chart; The labor market; Special articles on employment, wages, prices, and labor disputes, 1915; Employment in Germany in November; Retail food prices in the United Kingdom, Berlin, Vienna, and Italy; Increase in cost of food in New Zealand, July, 1914–August, 1915; Welfare supervision; Coal mining organization committee; Official mediation in labor disputes in Norway; Reports of employment in the principal industries; Labor in the Dominions and in foreign countries, Denmark, Norway, United States; Board of trade labor exchanges. Statistical tables: Trade disputes; Distress committees; Changes in rates of wages; Prices of wheat, flour, and bread; Pauperism; Unemployment insurance; Diseases of occupations; Fatal industrial accidents; Building plans; Foreign trade; Passenger movement to and from the United Kingdom. Legal cases, official notices, etc.

Italy.—*Bollettino dell' Ufficio del Lavoro, Ministero di Agricoltura, Industria e Commercio. Rome. (Semimonthly.)*

December 15, 1915.—Labor market by localities and industries; Labor disputes, second half of November; Employers' and employees' associations; Congresses and conventions; Labor legislation Decree, November 11, 1915, providing facilities for the execution of public works; Activities of the bureau of labor; Illumination in factories and work shops.

January 1, 1916.—Labor market by localities and industries; Labor disputes, November, 1915; Employers' and employees' associations; Congresses and conventions; Retail prices and index numbers of food stuffs in Italian cities, first six months 1914 and November, 1915; Retail prices of foodstuffs in foreign countries: Great Britain (December, 1914, and July, 1915) Germany, Berlin (July, 1914, and October, 1915). Activities of the bureau of labor; Enforcement of labor legislation; Immediate effects of inhaling chlorine vapors; Poisoning in mines in the Transvaal.

January 16, 1916.—Labor market by localities and industries; Labor disputes, second half of December, 1915; Employers' and employees' associations; Congresses and conventions; Activities of the bureau of labor; Labor legislation; Decree, December 23, 1915, extending the term of validity of the decree of May 2, 1915, relating to expatriation for the purpose of securing work; Decree, December 23, 1915, prohibiting fishing in the Ionian Sea; Decree, December 29, 1915, extending the validity of various decrees for facilitating the payment of rents; Decree, January 2, 1915, authorizing the Government to extend its military discipline to dock labor at Italian seaports; Enforcement of social legislation; Court decisions relating to labor.

———— (Monthly).

September–October, 1915.—Labor market in foreign countries (France, July, 1915); Labor disputes in Italy; Labor disputes in foreign countries (France, July and August, 1915; Buenos Aires, Argentina, 1913); Trade-unions in Canada, 1914; the problem of illumination in factories and workshops; Hygiene of the painters' trade; Occu-

pational aneurism of the hand; Approval by the second national conference of the American Association for Labor Legislation of a practical program of action against unemployment. Labor legislation—Australia: Report of the chief inspector of factories, Melbourne, on antistrike legislation; Canada: Proposed amendment of the industrial disputes investigation act. Prices of articles of consumption paid by State educational institutions.

Netherlands.—*Maandschrift van het Central Bureau voor de Statistiek. The Hague.*

December, 1915.—Review of the labor market, building trades, clothing and cleaning, and coal mining, November, 1915; Fisheries and dock labor, December, and employment of interned soldiers to supply deficiency of labor in Netherlands; Unemployment and unemployment insurance, 1911–1915; Labor exchanges; Strikes and lockouts; Wages, collective agreements, etc.; Workmen's organizations; Wholesale prices, 1914, 1915; Retail prices (index figures), 1913 to November, 1915; Number and classes of passports issued; Court decisions. Miscellaneous reports—Statistics of population, workmen's dwellings; Public contracts awarded; Invalidity and old-age pensions; Accidents; Postal savings bank, etc. International: Resume of war measures; Labor market in various countries; Labor exchanges; Strikes and lockouts in Australia, Germany, Great Britain, and Italy; Retail prices in Denmark, Great Britain, Italy, Norway, Austria, Sweden, and Switzerland; Cooperative societies in Germany; Conciliation and unemployment insurance in Norway. Statistical tables relating to the labor market and to public finance.

New South Wales.—*The New South Wales Industrial Gazette, issued by the Department of Labor and Industry. Sydney.*

November, 1915.—The industrial situation, October, 1915; Law of industrial import; Working of the factories and shops act, October, 1912; Departmental intelligence (industrial law); Judgments of industrial boards; Industrial arbitration; Factories and shops act, notice in regard to returns; Judicial, etc., proceedings; Departmental records—(Chief inspector of factories office; Gas examiner's office; Industrial registrar's office; Investigation office; Labor exchanges); Records of industrial boards, etc.; Industrial agreements and awards expired, rescinded, new, and in force.

New Zealand.—*Journal of the Department of Labor. Wellington.*

December, 1915.—Conditions of employment and trade, November, 1915; Woman's employment branches reports; Recent legal decisions of interest to labor; Death cases under the workmen's compensation act; Statistical tables of employment exchange data, registered trade-unions, cooperative works, accidents in factories, and current retail prices (November, 1915).

Spain.—*Boletín del Instituto de Reformas Sociales. Publicación Mensual. Madrid.*

December, 1915.—Report of the secretary's office and of the special divisions; Directory of associations; Strikes in 1914 and in November, 1915; Prices of various articles of food, October, 1914, and March, 1915; Proceedings of the convention of national federation of railway employees; Legislation. Foreign notes: Strikes and lockouts in Germany, third quarter, 1915; Great Britain, October, 1915. Index for July to December, 1915, issues.

Sweden.—*Sociala Meddelanden utgivna av K. Socialstyrelsen. Stockholm.*

November 12, 1915.—Report of the State unemployment commission on unemployment among stone workers, May, 1915; Relief and bonus payments by employers to offset the high cost of living; Foreign countries and the war (France); Prices and wages at certain armament works; Results of the housing census, 1912–13, at Eskilstuna; Maximum price fixed by the State on rye, wheat, and oats; Feeding of school children in Stockholm; Cost of living in Denmark during the war; Fatal industrial accidents;

Brief notices, mainly from foreign countries; Public-employment exchanges, November, 1915; Retail prices and cost of living, 1904 to November, 1915; Prices of cattle on the hoof, 1904 to November, 1915; Fish prices in Stockholm, November, 1914 and 1915; Reports from the royal pension bureau.

MISCELLANEOUS.

Austria.—*Amtliche Nachrichten des k. k. Ministeriums des Innern betreffend die Unfallversicherung und die Krankenversicherung der Arbeiter. Vienna.*

December, 1915.—Accident insurance; Election and appointment of officers of the workmen's accident insurance institutes and courts of arbitration; Decisions of the courts of arbitration; Sickness insurance; Order relating to annual reports of sick funds; Redetermination of the customary local daily wages.

Germany.—*Amtliche Nachrichten des Reichsversicherungsamts. Berlin.*

September, 1915.—General part: Decree, August 19, 1915, of the imperial chancellor postponing the new determination of the customary local wages. Accident insurance. Circular decree, September 3, 1915, of the imperial insurance office to the directorates of trade accident associations as to the employment of persons injured in the war; Decisions of the imperial insurance office. Sickness, invalidity, and survivors' insurance: Circular decree, ~~September 3, 1915, of the imperial insurance office to the directorates of the State insurance institutes as to the granting of curative treatment to tubercular persons participating in the war;~~ Decree, September 15, 1915, of the imperial insurance office exempting specified persons from the obligation to insure; Decisions on appeal; Decisions of the decision senates; Disbursements of the invalidity insurance institutes, July, 1915, for pensions and benefits to insured persons and their survivors; Receipts from the sale of contribution stamps, August, 1915.

October 15, 1915.—Accident insurance: Approval by the imperial insurance office of regulations for accident prevention and risk tariffs, third quarter, 1915; Decisions on appeals. Sickness, invalidity, and survivors' insurance: Circular letter, June 24, 1915, of the imperial insurance office to the directorates of the State insurance institutes containing a statement of the investments of these institutes, December 31, 1915; Decisions on appeals; Decisions of the decision senates; Disbursements of the invalidity insurance institutes for pensions and benefits to insured persons and their survivors, August, 1915; Receipts from the sale of contribution stamps, September, 1915.



**U. S. DEPARTMENT OF LABOR
BUREAU OF LABOR STATISTICS**

ROYAL MEEKER, Commissioner

MONTHLY REVIEW

OF THE

U. S. BUREAU OF LABOR STATISTICS

VOLUME II—APRIL, 1916—NUMBER 4



**WASHINGTON
GOVERNMENT PRINTING OFFICE
1916**

SERIES OF BULLETINS PUBLISHED BY THE BUREAU OF LABOR STATISTICS.

[The publication of the Annual and Special Reports and of the bimonthly Bulletin has been discontinued, and since July, 1912, a Bulletin has been published at irregular intervals. Each number contains matter devoted to one of a series of general subjects. These Bulletins are numbered consecutively in each series and also carry a consecutive whole number, beginning with No. 101. A list of the series, together with the individual Bulletins falling under each, is given below. A list of the Reports and Bulletins of the Bureau issued prior to July 1, 1912, will be furnished on application.]

Wholesale Prices.

- No. 1. Wholesale prices, 1890 to 1912. (Bul. No. 114.)
- No. 2. Wholesale prices, 1890 to 1913. (Bul. No. 149.)
- No. 3. Index numbers of wholesale prices in the United States and foreign countries. (Bul. No. 173.)
- No. 4. Wholesale prices, 1890 to 1914. (Bul. No. 181.)

Retail Prices and Cost of Living.

- No. 1. Retail prices, 1890 to 1911: Part I. (Bul. No. 105: Part I.)
Retail prices, 1890 to 1911: Part II—General tables. (Bul. No. 105: Part II.)
- No. 2. Retail prices, 1890 to June, 1912: Part I. (Bul. No. 106: Part I.)
Retail prices, 1890 to June, 1912: Part II—General tables. (Bul. No. 106: Part II.)
- No. 3. Retail prices, 1890 to August, 1912. (Bul. No. 108.)
- No. 4. Retail prices, 1890 to October, 1912. (Bul. No. 110.)
- No. 5. Retail prices, 1890 to December, 1912. (Bul. No. 113.)
- No. 6. Retail prices, 1890 to February, 1913. (Bul. No. 115.)
- No. 7. Sugar prices, from refiner to consumer. (Bul. No. 121.)
- No. 8. Retail prices, 1890 to April, 1913. (Bul. No. 125.)
- No. 9. Wheat and flour prices, from farmer to consumer. (Bul. No. 130.)
- No. 10. Retail prices, 1890 to June, 1913. (Bul. No. 132.)
- No. 11. Retail prices, 1890 to August, 1913. (Bul. No. 136.)
- No. 12. Retail prices, 1890 to October, 1913. (Bul. No. 138.)
- No. 13. Retail prices, 1890 to December, 1913. (Bul. No. 140.)
- No. 14. Retail prices, 1907 to December, 1914. (Bul. No. 156.)
- No. 15. Butter prices, from producer to consumer. (Bul. No. 164.)
- No. 16. Retail prices, 1907 to June, 1915. (Bul. No. 184.)

Wages and Hours of Labor.

- No. 1. Wages and hours of labor in the cotton, woolen, and silk industries, 1890 to 1912. (Bul. No. 128.)
- No. 2. Wages and hours of labor in the lumber, millwork, and furniture industries, 1890 to 1912. (Bul. No. 129.)
- No. 3. Union scale of wages and hours of labor, 1907 to 1912. (Bul. No. 131.)
- No. 4. Wages and hours of labor in the boot and shoe and hosiery and knit goods industries, 1890 to 1912. (Bul. No. 134.)
- No. 5. Wages and hours of labor in the cigar and clothing industries, 1911 and 1912. (Bul. No. 135.)
- No. 6. Wages and hours of labor in the building and repairing of steam railroad cars, 1890 to 1912. (Bul. No. 137.)
- No. 7. Union scale of wages and hours of labor, May 15, 1913. (Bul. No. 143.)
- No. 8. Wages and regularity of employment in the dress and waist industry of New York City. (Bul. No. 146.)
- No. 9. Wages and regularity of employment in the cloak, suit, and skirt industry. (Bul. No. 147.)
- No. 10. Wages and hours of labor in the cotton, woolen, and silk industries, 1907 to 1913. (Bul. No. 150.)
- No. 11. Wages and hours of labor in the iron and steel industry in the United States, 1907 to 1912. (Bul. No. 151.)
- No. 12. Wages and hours of labor in the lumber, millwork, and furniture industries, 1907 to 1913. (Bul. No. 153.)
- No. 13. Wages and hours of labor in the boot and shoe and hosiery and underwear industries, 1907 to 1913. (Bul. No. 154.)
- No. 14. Wages and hours of labor in the clothing and cigar industries, 1911 to 1913. (Bul. No. 161.)
- No. 15. Wages and hours of labor in the building and repairing of steam railroad cars, 1907 to 1913. (Bul. No. 163.)
- No. 16. Wages and hours of labor in the iron and steel industry, 1907 to 1913. (Bul. No. 168.)
- No. 17. Union scale of wages and hours of labor, May 1, 1914. (Bul. No. 171.)
- No. 18. Wages and hours of labor in the hosiery and underwear industry, 1907 to 1914. (Bul. No. 177.)
- No. 19. Wages and hours of labor in the boot and shoe industry, 1907 to 1914. (Bul. No. 178.)
- No. 20. Wages and hours of labor in the clothing industry, 1911 to 1914. (Bul. No. 187.) [In press.]
- No. 21. Wages and hours of labor in the cotton, woolen, and silk industries, 1907 to 1914. (Bul. No. 190.) [In press.]
- No. 22. Union scale of wages and hours of labor, May 1, 1915. (Bul. No. 194.) [In press.]

Employment and Unemployment.

- No. 1. Proceedings of the American Association of Public Employment Offices. (Bul. No. 192.) [In press.]
- No. 2. Unemployment in the United States. (Bul. No. 195.) [In press.]
- No. 3. Proceedings of Unemployment Managers' Conference. (Bul. No. 196.) [In press.]

[See also third page of cover.]

MONTHLY REVIEW

OF THE

U. S. BUREAU OF LABOR STATISTICS

VOL. II—NO. 4

WASHINGTON

APRIL, 1916

FEDERAL EMPLOYMENT WORK OF THE DEPARTMENT OF LABOR.

During February, 1916, the Division of Information of the Department of Labor placed 4,185 persons in employment as compared with 3,419 during January, 1916. As there were 14,257 applications for work, 29.35 per cent were therefore placed as compared with 22.77 per cent for January. The operations of the division by months since May, 1915, when fuller reports began to be made, are contained in the following statement:

OPERATIONS OF THE DIVISION OF INFORMATION, BUREAU OF IMMIGRATION,
DURING THE MONTHS OF MAY, 1915, TO FEBRUARY, 1916.

Month.	Number of applica- tions for help.	Number of persons ap- plied for.	Number of applicants for places.	Number referred to employ- ment.	Number actually employed.	Per cent of appli- cants placed.
1915						
May.....	638	3,826	12,132	3,752	3,495	28.81
June.....	1,249	3,601	14,530	5,131	4,646	31.98
July.....	1,160	8,665	18,061	6,360	6,035	33.41
August.....	1,279	7,931	17,827	7,321	6,757	37.90
September.....	1,201	4,551	13,334	5,671	5,405	40.54
October.....	1,104	5,423	12,215	5,460	5,006	40.98
November.....	847	4,650	11,908	4,459	4,146	34.82
December.....	698	3,588	11,902	2,622	2,170	18.23
1916						
January.....	933	5,063	15,015	4,800	3,419	22.78
February.....	1,423	6,413	14,257	5,036	4,185	29.35

The following statement of the employment work of the 18 separate zones of operation covering the whole country gives the usual details for January and February, 1916.

2 MONTHLY REVIEW OF THE BUREAU OF LABOR STATISTICS.

SUMMARY OF ACTIVITIES FOR THE MONTHS OF JANUARY AND FEBRUARY, 1916.

Zone.	Opportunities received.				Applications for employment.					
	Applications for help.		Number of persons applied for.		Applications received.		Referred to employment.		Number actually employed.	
	January.	February.	January.	February.	January.	February.	January.	February.	January.	February.
1. Boston, Mass.....	2	1	3	1	44	26	1	.....	1	.....
Portland, Me.....	.....	.....	.....	.....	3	.....	.....	.....	.....	.....
Total.....	2	1	3	1	47	26	1	.....	1	.....
2. New York, N. Y.....	91	106	186	1,189	1,069	1,122	431	500	332	363
Buffalo, N. Y.....	33	50	730	1,787	830	855	685	638	449	498
Total.....	124	156	916	2,976	1,899	1,977	1,116	1,138	781	861
3. Philadelphia, Pa.....	74	93	773	117	559	412	271	227	231	166
Pittsburg, Pa.....	19	8	1,381	18	977	508	428	206	174	88
Total.....	93	101	2,154	135	1,536	920	699	433	405	254
4. Baltimore, Md.....	21	24	33	47	354	233	264	173	264	178
5. Norfolk, Va.....	12	25	92	29	64	95	15	18	20	22
6. Jacksonville, Fla.....	.....	.....	.....	.....	34	9	1	.....	1	.....
Miami, Fla.....	17	16	64	25	93	98	18	21	9	13
Charleston, S. C.....	2	5	12	40	59	74	2	58	1	56
Savannah, Ga.....	8	5	33	374	55	72	32	44	24	30
Mobile, Ala.....	.....	1	.....	1	14	7	.....	.....	.....	.....
Total.....	27	27	109	440	255	260	53	123	35	99
7. New Orleans, La.....	7	3	7	3	36	96	12	20	3	1
Gulfport, Miss.....	.....	1	.....	1	17	47	.....	.....	.....	.....
Memphis, Tenn.....	1	2	1	22	44	38	.....	1	.....	1
Total.....	8	6	8	26	97	181	12	21	3	2
8. Galveston, Tex.....	5	6	6	13	93	70	1	19	.....	11
Amarillo, Tex.....	.....	.....	.....	.....	6	1	.....	.....	.....	.....
Houston, Tex.....	.....	8	.....	10	159	155	.....	5	.....	5
Laredo, Tex.....	1	.....	1	.....	1	.....	1	.....	1	.....
Albuquerque, N. Mex.....	1	.....	1	.....	6	8	.....	.....	.....	.....
Total.....	7	14	8	23	265	234	2	24	1	16
9. Cleveland, Ohio.....	23	33	82	365	126	197	38	124	15	42
10. Chicago, Ill.....	76	95	654	156	5,299	2,503	1,083	850	1,032	840
Detroit, Mich.....	.....	64	.....	147	77	137	19	82	14	79
Sault Ste. Marie, Mich.....	9	7	45	54	44	45	14	35	14	34
Indianapolis, Ind.....	31	33	159	235	279	309	148	250	138	250
Total.....	116	199	858	592	5,699	2,994	1,264	1,217	1,198	1,203
11. Minneapolis, Minn.....	32	103	36	114	36	63	13	31	13	29
12. St. Louis, Mo.....	9	13	18	31	212	237	16	29	15	23
Kansas City, Mo.....	13	41	45	93	317	493	45	45	45	40
Total.....	22	54	63	124	529	730	61	74	60	63
13. Denver, Colo.....	6	15	7	17	72	126	30	50	3	11
Salt Lake City, Utah.....	.....	.....	.....	.....	10	.....	.....	.....	.....	.....
Total.....	6	15	7	17	82	126	30	50	3	11
14. Helena, Mont.....	2	2	2	5	21	18	1	11	.....	1
Moscow, Idaho.....	.....	2	.....	2	.....	.....	5	5	.....	2
Total.....	2	4	2	7	21	18	6	16	.....	3

SUMMARY OF ACTIVITIES FOR THE MONTHS OF JANUARY AND FEBRUARY, 1916—
Concluded.

Zone.	Opportunities received.				Applications for employment.					
	Applications for help.		Number of persons applied for.		Applications received.		Referred to employment.		Number actually employed.	
	Janu-ary.	Febru-ary.	Janu-ary.	Febru-ary.	Janu-ary.	Febru-ary.	Janu-ary.	Febru-ary.	Janu-ary.	Febru-ary.
15. Seattle, Wash.....	23	26	25	40	346	322	24	29	22	28
Aberdeen, Wash.....	6	10	33	41	142	175	33	41	33	41
Bellingham, Wash.....		9		11	47	94		9		8
Everett, Wash.....	2	5	3	8	28	25	5	8	3	8
North Yakima, Wash.....	62	122	103	168	186	487	103	165	103	164
Spokane, Wash.....	3	57	3	65	79	137	2	38	2	38
Takoma, Wash.....	7	53	16	111	141	538	16	110	16	109
Walla Walla, Wash.....	13	58	16	77	129	308	12	64	12	60
Total.....	116	340	199	521	1,098	2,086	195	464	191	456
16. Portland, Oreg.....	5	8	22	13	96	126	20	8	18	8
17. San Francisco, Cal.....	183	174	227	215	1,600	2,180	221	308	177	184
Fresno, Cal.....										
Total.....	183	174	227	215	1,600	2,180	221	308	177	184
18. Los Angeles, Cal.....	5	1	6	1	432	540	5	1	4	1
Bakersfield, Cal.....		1		5		29		5		5
San Diego, Cal.....	126	136	235	761	774	1,241	285	808	230	753
Tucson, Ariz.....	3	1	3	1	5	1				
Total.....	134	139	244	768	1,211	1,811	290	814	234	759
Total for month.....	933	1,423	5,063	6,413	15,015	14,257	4,300	5,036	3,419	4,185

CONCILIATION WORK OF THE DEPARTMENT OF LABOR,
FEBRUARY 16 TO MARCH 15, 1916.

On the authority contained in the organic act of the department to mediate in labor disputes and to appoint commissioners of conciliation in its discretion, the Secretary of Labor, through the commissioners of conciliation, exercised his good offices in 33 labor disputes between February 16 and March 15, 1916. The strike of the brewery workers, Washington, D. C., reported in the statement of February 15, 1916, in last month's REVIEW, has been adjusted.

The companies involved in the 33 controversies, the number of employees affected, and the results secured, as far as available, are shown in the statement following.

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NUMBER OF LABOR DISPUTES HANDLED BY THE DEPARTMENT OF LABOR,
THROUGH ITS COMMISSIONERS OF CONCILIATION, FEB. 16 TO MAR. 15, 1916.

Name.	Workmen affected—		Result.
	Directly.	Indi-rectly.	
Alaskan R. R.....			Pending.
Allegheny Dye Works, Philadelphia, Pa.....			Do.
Baltimore & Ohio R. R. and machinists, Baltimore, Md.....	1,514		Adjusted.
Jacob Berges & Co., Philadelphia, Pa.....			Do.
Berkshire Mills, Frankford, Philadelphia, Pa.....			Do.
Christi's Silk Hosiery, Philadelphia, Pa.....			Do.
Continental Dye Works, Philadelphia, Pa.....			Pending.
Doubleday, Page Printing Co., New York City.....			Do.
Firth & Foster Co., Philadelphia, Pa.....			Do.
Ford Silk Hosiery, Philadelphia, Pa.....			Adjusted.
Frankford Dyeing, Bleaching Works, Philadelphia, Pa.....			Pending.
General Processing Co., Philadelphia, Pa.....			Adjusted.
Germantown Dye Works, Philadelphia, Pa.....			Pending.
Globe Dye Works, Philadelphia, Pa.....			Do.
Greer's Dye Works, Philadelphia, Pa.....			Adjusted.
Wm. Kedward Dyeing Co., Philadelphia, Pa.....			Pending.
George Liffart, spinner and dyer, Philadelphia, Pa.....			Adjusted.
Machinists, Edwards Valve Co., East Chicago, Ind.....			Pending.
Machinists and the Contract Shop, Norfolk, Va.....	65	300	Adjusted.
Motormen and conductors employed by Capital Traction Co. and Washington Railway & Electric Light Co., Washington, D. C. ¹	1,500		Do.
New York, New Haven & Hartford R. R. and mechanical force..	4,000		Pending.
New York, Ontario & Western R. R., Middletown, N. Y.....			Do.
New York Post, New York City.....			Do.
Nicotown Dye Works, Philadelphia, Pa.....			Do.
Orinoco Dye Works, Philadelphia, Pa.....			Adjusted.
Philadelphia Dye Works.....			Pending.
Philadelphia Tapestry Works, Philadelphia, Pa.....			Adjusted.
Quaker Dye & Bleach Works, Philadelphia, Pa.....			Do.
Karl Schlatter Dye Works, Philadelphia, Pa.....			Pending.
Stead & Miller's Dye Works, Philadelphia, Pa.....			Adjusted.
Stewart Hartshorn Co., Harrison, N. J.....	30	1,200	(²)
Times-Union, Jacksonville, Fla.....			Pending.
Wallace Wilson's Dye Works, Philadelphia, Pa.....			Adjusted.

¹ For full account of this strike, see pp. 28 to 36.

² The company has closed its machine shop at Harrison, N. J., and insists that the strike is a closed incident.

IMMIGRATION IN JANUARY, 1916.

There were 1,608, or 8.5 per cent, fewer alien immigrant arrivals into the United States in January, 1916, than in December, 1915. Compared with January, 1915, there were 1,812, or 11.7 per cent, more arrivals in January, 1916, but 27,415, or 61.3 per cent, less than in January, 1914. The number of arrivals in February, 1916, was 7,446, or 43.1 per cent, greater than in January preceding, and 10,866, or 78.3 per cent, greater than in February, 1915, but 22,134, or 89.5 per cent, less than in February, 1914. The following table shows the total number of immigrant aliens admitted to the United States during the last three months, December, 1915, and January and February, 1916, as compared with the same months in 1914 and 1915:

IMMIGRANT ALIENS ADMITTED TO THE UNITED STATES, IN SPECIFIED MONTHS,
IN 1914, 1915, AND 1916.

Month.	1914	1915	1916
December.....	20,944	18,901	.....
January.....	44,708	15,481	17,293
February.....	46,873	13,873	24,739

Classified by races, the immigrant arrivals into and departures from the United States for January, 1916, the latest month for which such detailed figures are available, and for the same month of 1915, were as follows:

IMMIGRANT ALIENS ADMITTED TO AND EMIGRANT ALIENS DEPARTING FROM THE
UNITED STATES DURING JANUARY, 1915, AND JANUARY, 1916.

Race.	Admitted.		Departed.	
	January, 1915	January, 1916	January, 1915	January, 1916
African (black).....	113	131	82	66
Armenian.....	44	74	7	11
Bohemian and Moravian.....	42	46	4	3
Bulgarian, Servian, Montenegrin.....	153	108	426	8
Chinese.....	225	146	216	266
Croatian and Slavonian.....	37	61	8	3
Cuban.....	78	105	158	120
Dalmatian, Bosnian, and Herzegovinian.....	5	5	.....	.....
Dutch and Flemish.....	422	367	120	52
East Indian.....	1	7	7	20
English.....	2,232	2,499	1,126	496
Finnish.....	114	284	33	39
French.....	681	1,034	241	154
German.....	1,068	911	108	55
Greek.....	915	1,619	783	226
Hebrew.....	753	1,477	24	12
Irish.....	867	953	151	139
Italian (north).....	734	429	679	222
Italian (south).....	2,994	1,923	10,209	2,253
Japanese.....	651	651	72	65
Korean.....	16	14	3	2
Lithuanian.....	35	59	5	1
Magyar.....	44	108	6	15
Mexican.....	712	57	31	50
Pacific Islander.....	.....	.....	.....	1
Polish.....	87	363	42	14
Portuguese.....	116	714	57	71
Roumanian.....	24	122	21	3
Russian.....	107	519	889	230
Ruthenian (Russniak).....	59	76	.....	2
Scandinavian.....	666	604	182	104
Scotch.....	878	977	176	219
Slovak.....	25	99	2	2
Spanish.....	252	421	221	163
Spanish-American.....	100	104	48	41
Syrian.....	64	58	9	4
Turkish.....	7	15	3	8
Welsh.....	50	57	11	18
West Indian (except Cuban).....	29	47	43	30
Other peoples.....	81	49	58	27
Not specified.....	.....	.....	977	700
Total.....	15,481	17,293	17,238	5,915
Per cent increase, 1916.....	.....	11.7	.....	165.7

¹ Decline.

EMPLOYMENT IN SELECTED INDUSTRIES IN FEBRUARY, 1916.

Continuing the subject begun in the January Review, figures are here given showing the changes in the amount of employment in February, 1916, as compared with January, 1916, and with February, 1915. The scope of the work has been enlarged by the inclusion of two new industries, car building and repairing, and men's ready-made clothing. It is hoped that the figures will be of such interest and service to manufacturers that a larger number of returns will be made for succeeding months. Inquiries are being sent only to certain representative establishments throughout the United States, but it is desirable that the Bureau enlarge the scope of the work by covering more establishments in the industries now carried, and by extending the inquiry to still other industries.

The table for February, 1916, and January, 1916, shows that the number of employees in February, 1916, was greater in all industries than in January, 1916, except in the silk industry, where there was a decrease of 2.6 per cent. The greatest increase was in the woolen industry, where 2.4 per cent more employees were on the pay roll in February, 1916, than in January, 1916. A larger amount of money was paid to employees in the industries covered in this table in February, 1916, than in January, 1916, in all industries except boots and shoes, where there was a decrease of 0.9 per cent. The largest increase in the amount of pay roll, in any industry, in February, 1916, over January, 1916, was in the iron and steel industry, where the increase was 13.3 per cent. Cotton manufacturing and the woolen industry showed approximately the same percentage of increase, while cotton finishing and hosiery and underwear showed exactly the same percentage of increase.

COMPARISON OF EMPLOYMENT IN IDENTICAL ESTABLISHMENTS IN JANUARY, 1916, AND FEBRUARY, 1916.

Industry.	Estab- lish- ments to which in- quiries were sent.	Estab- lish- ments re- port- ing for Janu- ary and Feb- ruary.	Period of pay roll.	Employees.			Earnings.		
				Number on pay roll in—		Per cent of in- crease (+) or de- crease (-).	Amount of pay roll in—		Per cent of in- crease (+) or de- crease (-).
				Janu- ary, 1916.	Febru- ary, 1916.		Janu- ary, 1916.	Febru- ary, 1916.	
Boots and shoes.....	85	63	1 week..	52,792	52,897	+0.2	\$704,155	\$698,160	- 0.9
Cotton manufacturing....	92	57	...do.....	43,061	43,617	+1.3	359,791	388,315	+ 7.9
Cotton finishing.....	19	16	...do.....	11,937	12,018	+ .7	132,315	138,328	+ 4.5
Hosiery and underwear...	82	58	...do.....	29,325	29,574	+ .8	273,726	286,041	+ 4.5
Woolen.....	24	18	...do.....	11,987	12,271	+2.4	129,840	139,703	+ 7.6
Silk.....	62	36	2 weeks..	16,485	16,054	-2.6	318,137	334,859	+ 5.3
Iron and steel.....	139	86	½ month..	125,096	128,031	+2.3	3,956,609	4,482,205	+13.3

An examination of the table giving number of employees and their earnings for February, 1915, and February, 1916, shows that the

number of employees in February, 1916, was greater in all industries than in February, 1915, except in the cotton manufacturing and men's ready-made clothing industries. In the men's ready-made clothing industry the number of employees in February, 1916, was 0.6 per cent less than in February, 1915. The greatest increase was in the car building and repairing industry, where the number of employees in February, 1916, was 46.3 per cent more than in February, 1915. In all the industries more money was paid to employees in February, 1916, than in February, 1915, the greatest increase in the amount of pay roll being in the iron and steel industry, where the amount paid to employees in February, 1916, was 73 per cent greater than in February, 1915. Employees of the car building and repairing industry received 70.2 per cent more in wages in February, 1916, than in February, 1915. The smallest increase in the amount of money paid to employees was in the cotton manufacturing industry, where employees received 5.2 per cent more in February, 1916, than in February, 1915.

COMPARISON OF EMPLOYMENT IN IDENTICAL ESTABLISHMENTS IN FEBRUARY, 1915,
AND FEBRUARY, 1916.

Industry.	Estab- lish- ments to which in- quiries were sent.	Estab- lish- ments report- ing for Feb- ruary both years.	Period of pay roll.	Employees.			Earnings.		
				Number on pay roll in—		Per cent of in- crease (+) or de- crease (-).	Amount of pay roll in—		Per cent of in- crease (+) or de- crease (-).
				Febru- ary, 1915.	Febru- ary, 1916.		Febru- ary, 1915.	Febru- ary, 1916.	
Boots and shoes.....	85	67	1 week..	47,537	54,942	+15.6	\$563,306	\$726,567	+29.0
Cotton manufacturing...	92	61	...do.....	45,676	45,666	(¹)	382,220	402,012	+ 5.2
Cotton finishing.....	19	16	...do.....	11,254	12,018	+ 6.8	119,458	138,328	+15.8
Hosiery and underwear..	82	58	...do.....	27,156	30,059	+10.7	221,040	286,944	+29.8
Woolen.....	24	20	...do.....	13,945	16,180	+16.0	129,964	174,291	+34.1
Silk.....	61	40	2 weeks..	17,014	17,869	+ 5.0	311,215	364,856	+17.2
Men's ready-made cloth- ing.	88	39	1 week..	19,053	18,940	- .6	227,085	241,799	+ 6.5
Iron and steel.....	139	93	½ month..	94,200	134,920	+43.2	2,737,536	4,737,278	+73.0
Car building and repair- ing.	73	39	...do.....	32,775	47,956	+46.3	865,315	1,472,617	+70.2

¹ Decrease of less than one-tenth of 1 per cent.

In addition to the data presented in the above tables for number of employees on the pay roll, 90 plants in the iron and steel industry reported 113,112 employees as actually working on the last full day of the pay period reported for in February, 1916, as against 78,026 for the reported pay-roll period in February, 1915, an increase of 45 per cent. Figures given by 83 establishments in the iron and steel industry for February, 1916, and January, 1916, show that 110,725 employees were actually working on the last full day of the pay period reported for in February, 1916, as against 107,144 for the reported period in January, 1916, an increase of 3.3 per cent.

WORK OF STATE AND MUNICIPAL EMPLOYMENT BUREAUS.

The publication of data relative to the operations of free public employment offices begun in the January, 1916, issue of the REVIEW is continued in this number. In the table following, information is given for State employment bureaus in 13 States, municipal employment bureaus in 9 States, State-city employment bureaus in 1 State, and a Federal-municipal employment bureau in 1 State. Data are given for January, 1915, and January, 1916, from bureaus not included in the preceding publication but which have reported those data since the publication of the March issue of the REVIEW, and for February, 1916, from all bureaus rendering reports for that month. Figures for February, 1915, from such bureaus as have furnished that information are also presented for comparative purposes.

OPERATIONS OF PUBLIC EMPLOYMENT OFFICES, JANUARY AND FEBRUARY OF 1915 AND 1916.

State and city.	Number of appli- cations from em- ployers.	Number of persons asked for by em- ployers.	Number of persons applying for work.		Number of persons referred to positions.	Number of positions filled.
			New regis- trations.	Re- newals.		
<i>California (municipal).</i>						
Berkeley:						
January, 1915.....	100	112	174	747	112	112
January, 1916.....	118	131	182	617	131	131
February, 1915.....	103	120	184	653	117	117
February, 1916.....	142	150	189	533	146	146
Sacramento:						
January, 1915.....	113	171	173	(1)	171	171
January, 1916.....	133	267	70	(1)	267	267
February, 1915.....	100	(1)	96	(1)	147	147
February, 1916.....	175	(1)	55	(1)	234	234
<i>Colorado (State).</i>						
Colorado Springs:						
February, 1915.....	(1)	211	(1)	(1)	(1)	207
February, 1916.....	(1)	348	590	(1)	337	(1)
Denver No. 1:						
February, 1915.....	(1)	50	(1)	(1)	(1)	54
February, 1916.....	(1)	145	186	(1)	95	(1)
Denver No. 2:						
February, 1915.....	(1)	107	(1)	(1)	(1)	107
February, 1916.....	(1)	159	277	(1)	159	(1)
Pueblo:						
February, 1915.....	(1)	566	(1)	(1)	(1)	56
February, 1916.....	(1)	156	187	(1)	149	(1)
<i>Connecticut (State).</i>						
Bridgeport:						
January, 1915.....	168	(1)	(1)	(1)	(1)	145
January, 1916.....	652	(1)	(1)	(1)	(1)	570
Hartford:						
January, 1915.....	170	(1)	(1)	(1)	(1)	146
January, 1916.....	480	(1)	(1)	(1)	(1)	380
New Haven:						
January, 1915.....	129	(1)	(1)	(1)	(1)	103
January, 1916.....	444	(1)	(1)	(1)	(1)	312
Norwich:						
January, 1915.....	31	(1)	(1)	(1)	(1)	25
January, 1916.....	190	(1)	(1)	(1)	(1)	178
Waterbury:						
January, 1915.....	139	(1)	(1)	(1)	(1)	103
January, 1916.....	174	(1)	(1)	(1)	(1)	111

¹ Not reported.

OPERATIONS OF PUBLIC EMPLOYMENT OFFICES, JANUARY AND FEBRUARY OF
1915 AND 1916—Continued.

State and city.	Number of appli- cations from em- ployers.	Number of persons asked for by em- ployers.	Number of persons applying for work.		Number of persons referred to positions.	Number of positions filled.
			New regis- trations.	Re- newals.		
<i>Illinois (municipal).</i>						
Chicago: February, 1916.....	1 31	725	600	(2)	725	485
<i>Indiana (State).</i>						
Evansville:						
February, 1915.....	(2)	107	2 245	(2)	107	115
February, 1916.....	(2)	123	2 212	(2)	125	118
Fort Wayne:						
February, 1915.....	(2)	127	2 288	(2)	134	122
February, 1916.....	(2)	138	2 197	(2)	134	119
Indianapolis:						
February, 1915.....	(2)	87	2 450	(2)	92	78
February, 1916.....	(2)	162	2 300	(2)	155	145
South Bend:						
February, 1915.....	(2)	168	2 651	(2)	151	174
February, 1916.....	(2)	311	2 413	(2)	248	228
Terre Haute:						
February, 1915.....	(2)	234	2 328	(2)	230	214
February, 1916.....	(2)	(2)	(2)	(2)	(2)	(2)
<i>Kansas (State).</i>						
Topeka:						
February, 1915.....	6	10	53	4	8	5
February, 1916.....	18	26	108	.....	30	17
<i>Kentucky (municipal).</i>						
Louisville: February, 1916.....	(2)	112	317	802	114	62
<i>Massachusetts (State).</i>						
Boston:						
February, 1915.....	785	953	4 612	(2)	2 1,759	836
February, 1916.....	1,462	1,782	4 1,008	(2)	2 2,914	1,366
Fall River:						
February, 1915.....	93	93	4 8	(2)	5 79	75
February, 1916.....	126	148	4 33	(2)	5 134	117
Springfield:						
February, 1915.....	302	318	4 105	(2)	5 374	243
February, 1916.....	578	765	4 270	(2)	5 958	637
Worcester:						
February, 1915.....	265	408	4 458	(2)	5 584	306
February, 1916.....	734	943	4 526	(2)	5 1,182	563
<i>Michigan (State).</i>						
Detroit:						
February, 1915.....	(2)	(2)	(2)	(2)	(2)	981
February, 1916.....	1,562	3,984	2 3,615	(2)	(2)	3,596
Flint: February, 1916.....	(2)	564	(2)	(2)	564	(2)
Saginaw: February, 1916.....	601	601	2 577	(2)	577	577
<i>Minnesota (State).</i>						
Duluth:						
February, 1915.....	(2)	(2)	(2)	(2)	(2)	389
February, 1916.....	(2)	(2)	(2)	(2)	(2)	485
Minneapolis:						
February, 1915.....	(2)	(2)	(2)	(2)	(2)	876
February, 1916.....	(2)	(2)	(2)	(2)	(2)	1,266
St. Paul:						
February, 1915.....	(2)	(2)	(2)	(2)	(2)	409
February, 1916.....	(2)	(2)	(2)	(2)	(2)	715
<i>Missouri (State).</i>						
Kansas City:						
January, 1915.....	(2)	179	2 568	(2)	(2)	173
January, 1916.....	(2)	112	2 173	(2)	(2)	102
February, 1916.....	(2)	135	2 192	(2)	(2)	132
St. Joseph:						
January, 1915.....	(2)	361	2 387	(2)	(2)	361
January, 1916.....	(2)	535	2 570	(2)	(2)	463
February, 1916.....	(2)	432	2 361	(2)	(2)	359
St. Louis:						
January, 1915.....	(2)	283	2 289	(2)	(2)	267
January, 1916.....	(2)	239	2 730	(2)	(2)	192
February, 1916.....	(2)	364	2 451	(2)	(2)	283

1 Number of requisitions.

2 Not reported.

3 Number applying for work.

4 Number who were registered.

5 Number of offers of position.

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OPERATIONS OF PUBLIC EMPLOYMENT OFFICES, JANUARY AND FEBRUARY OF
1915 AND 1916—Continued.

State and city.	Number of appli- cations from em- ployers.	Number of persons asked for by em- ployers.	Number of persons applying for work.		Number of persons referred to positions.	Number of positions filled.
			New regis- trations.	Re- newals.		
<i>Montana (municipal).</i>						
Butte:						
January, 1915.....	124	124	(1)	(1)	(1)	120
January, 1916.....	407	407	(1)	(1)	380	350
February, 1915.....	156	(1)	315	(1)	280	154
February, 1916.....	367	(1)	626	(1)	530	338
<i>New York (municipal.)</i>						
New York City:						
February, 1915.....	300	648	3,059	(1)	1,214	2,139
February, 1916.....	1,467	1,639	1,805	(1)	536	1,356
<i>New York (State).</i>						
Albany: February, 1916.....	260	311	394	265	446	208
Buffalo: February, 1916.....	540	779	646	357	855	520
New York City (Brooklyn): February, 1916.....	940	1,559	1,447	428	1,659	902
Rochester: February, 1916.....	644	959	619	381	1,005	439
Syracuse: February, 1916.....	477	624	493	123	621	460
<i>Ohio (State-city).</i>						
Akron: February, 1916.....	(1)	1,309	619	1,662	1,149	880
Cincinnati:						
February, 1915.....	(1)	2,724	2,070	8,449	2,818	2,433
February, 1916.....	(1)	1,288	1,614	4,488	1,274	776
Cleveland:						
February, 1915.....	(1)	4,398	3,241	13,179	4,428	4,090
February, 1916.....	(1)	6,267	2,006	8,166	4,485	3,484
Columbus:						
February, 1915.....	(1)	1,703	993	4,604	1,724	1,425
February, 1916.....	(1)	1,474	777	2,506	1,465	1,129
Dayton:						
February, 1915.....	(1)	414	399	1,678	395	311
February, 1916.....	(1)	959	684	1,209	769	719
Toledo:						
February, 1915.....	(1)	619	1,507	2,150	591	549
February, 1916.....	(1)	2,559	1,029	2,291	2,076	1,544
Youngstown: February, 1916.....	(1)	973	720	960	972	765
<i>Oklahoma (State).</i>						
Enid:						
February, 1915.....	93	(1)	2 117	(1)	(1)	57
February, 1916.....	73	(1)	2 165	(1)	(1)	64
Muskogee:						
February, 1915.....	64	(1)	2 100	(1)	(1)	64
February, 1916.....	191	(1)	2 199	(1)	(1)	167
Oklahoma City:						
February, 1915.....	57	(1)	2 287	(1)	(1)	56
February, 1916.....	206	(1)	2 301	(1)	(1)	166
Tulsa:						
February, 1915.....	(1)	(1)	(1)	(1)	(1)	(1)
February, 1916.....	(1)	230	2 216	(1)	(1)	211
<i>Oregon (municipal).</i>						
Portland:						
January, 1916.....	1,274	3,223	2,496	(1)	3,052	3,052
February, 1916.....	8,930	(1)	569	2,000	8,717	8,717
<i>Pennsylvania (State).</i>						
Harrisburg: February, 1916.....	38	131	176	11	304	228
Johnstown: February, 1916.....	(1)	53	59	.....	44	31
Philadelphia: February, 1916.....	(1)	777	442	314	446	311
<i>Rhode Island (State).</i>						
Providence:						
February, 1915.....	180	870	1,080	130	(1)	878
February, 1916.....	210	249	129	124	(1)	249

¹ Not reported.² Number applying for work.

OPERATIONS OF PUBLIC EMPLOYMENT OFFICES, JANUARY AND FEBRUARY OF 1915 AND 1916—Concluded.

State and city.	Number of appli- cations from em- ployers.	Number of persons asked for by em- ployers.	Number of persons applying for work.		Number of persons referred to positions.	Number of positions filled.
			New regis- trations.	Re- newals.		
<i>Texas (municipal).</i>						
Dallas:						
February, 1915.....	48	65	85	8	106	65
February, 1916.....	157	180	72	12	184	180
Fort Worth:						
February, 1915.....	55	71	1 752	(²)	79	68
February, 1916.....	100	152	211	106	158	149
<i>Virginia (municipal).</i>						
Richmond:						
February, 1915.....	89	392	(¹)	(²)	325	179
February, 1916.....	227	306	519	(²)	343	120
<i>Washington (municipal).</i>						
Everett:						
February, 1915.....	(²)	(²)	(²)	(²)	(²)	54
February, 1916.....	(²)	(²)	(²)	(²)	(²)	498
Seattle:						
January, 1916.....	680	1,348	339	(²)	1,348	680
February, 1916.....	1,251	3,253	370	(²)	3,246	1,244
Spokane:						
February, 1915.....	(²)	(²)	(²)	(²)	745	570
February, 1916.....	750	1,165	160	75	1,131	1,131
Tacoma (Federal-municipal): ³						
January, 1915.....	232	308	(²)	(²)	318	308
January, 1916.....	193	275	120	70	275	273
February, 1915.....	234	283	(²)	(²)	289	283
February, 1916.....	275	463	238	300	475	463
<i>Wisconsin (State).</i>						
La Crosse:						
February, 1915.....	91	155	4 256	(²)	124	46
February, 1916.....	112	236	4 285	(²)	210	86
Milwaukee:						
February, 1915.....	851	1,869	4 3,120	(²)	1,938	1,345
February, 1916.....	1,293	3,053	4 2,880	(²)	2,747	1,987
Oshkosh:						
February, 1915.....	72	84	4 374	(²)	67	56
February, 1916.....	104	119	4 224	(²)	119	79
Superior:						
February, 1915.....	193	333	4 474	(²)	424	301
February, 1916.....	241	704	4 718	(²)	744	535

¹ Number applying for work.² Not reported.³ Since February, 1916.⁴ Registrations.

LAND SETTLEMENT AND UNEMPLOYMENT IN ENGLAND.

Land settlement for the relief of unemployment contemplates two purposes: Relief from the congestion of industrial workers in urban centers and an increase in the agricultural production of the country by the addition of new supplies of labor upon the land. Such a policy of land settlement was outlined in general terms in the annual report of the Secretary of Labor for the fiscal year 1914-15. It was pointed out there that the mere securing of jobs for men was not a sufficient relief for involuntary unemployment, and there was held to be necessary such a "development of the national resources of this country as will tend to make opportunities for workers greater than the demands for work, and to keep them so" (p. 44). This was to be done by an extension of the homestead legislation in such ways as

to make possible by the Federal Government the colonization of workmen upon available public lands. It was felt that "the day of the individual pioneer is over."

Referring to this recommendation of the Secretary of Labor it is noteworthy that a recent committee of the British Board of Agriculture and Fisheries,¹ although in a somewhat different connection, makes a similar recommendation:

We consider it essential that any scheme of land settlement by the State should be on the colony system. * * * It would be quite impracticable for the State to undertake the provision of isolated holdings all over the country and it would be impossible under such a system to provide the expert guidance and business organization which will be so necessary if ex-service men are to be settled on the land with the best prospects of success. Association in groups is not only necessary for such men for these purposes, but it is also desirable in order to provide them with the social life to which they have become accustomed during their service with the colors. Moreover, there are fewer competitors for large blocks of land than for small properties, and it is often possible to obtain the land at wholesale instead of retail prices.

This committee was appointed to consider the question of the settlement for employment on the land of discharged sailors and soldiers upon the termination of the war. The first part of the report of this committee has recently appeared.

On the assumption that many of the discharged soldiers who may previously have engaged in agriculture will, on the termination of the war, be unwilling to return to that pursuit without special inducement, the committee deemed that State action would be necessary in order to supplement the existing machinery of the counties providing small holdings. It was pointed out that the efforts of the county councils in England and Wales had succeeded in providing land directly for only about 15,000 applicants in seven years, and as many of the returning soldiery will be men without any experience in farm work and life the difficulties of the future would be aggravated.

The committee recommends three types of grouped small holdings: (1) Fruit or market gardens, (2) dairy farms, (3) mixed farms, including possibly arable dairy farms. Assuming a minimum of at least 100 families to each village community, the minimum area should be 1,000 acres for a fruit and market garden settlement and 2,000 for a dairy or mixed-farm settlement.

It is contemplated that use shall be made of the expert agricultural advice of the department and provision be made for the organization of proper business methods, particularly along cooperative lines. It is proposed to provide a resident director for each colony for the preliminary instruction of the settlers, to give advice regarding

¹ Introduction and Part I of the Final Report of the Departmental Committee appointed by the president of the Board of Agriculture and Fisheries to consider the settlement or employment on the land in England and Wales of discharged sailors and soldiers. London, 1916. 30 pp. fold. chart. A short summary may be found in the Board of Trade Labor Gazette, London, 1916. Vol. 24, No. 2 (February), p. 47.

OPERATIONS OF PUBLIC EMPLOYMENT OFFICES, FEBRUARY AND MARCH, 1915
AND 1916—Concluded.

State and city.	Number of—					Posi- tions filled.
	Applica- tions from employ- ers.	Persons asked for by employ- ers.	Persons applying for work.		Persons referred to posi- tions.	
			New registra- tions.	Re- newals.		
<i>Washington (municipal).</i>						
Seattle: March, 1916.....	972	2,900	(1)	(1)	2,870	965
Spokane:						
March, 1915.....	(1)	(1)	(1)	(1)	1,011	804
March, 1916.....	960	1,250	100	50	1,194	1,194
<i>Wisconsin (State).</i>						
La Crosse:						
March, 1915.....	136	164	2 307	(1)	147	59
March, 1916.....	164	173	2 290	(1)	159	82
Milwaukee:						
March, 1915.....	1,364	1,558	2 2,757	(1)	1,581	970
March, 1916.....	1,757	3,053	2 2,602	(1)	2,669	1,948
Oshkosh:						
March, 1915.....	114	133	2 448	(1)	101	91
March, 1916.....	152	166	2 242	.....	149	103
Superior:						
March, 1915.....	175	212	2 506	(1)	276	161
March, 1916.....	246	399	2 452	(1)	449	344

¹ Not reported.

² Registrations.

EMPLOYMENT IN SELECTED INDUSTRIES IN MARCH, 1916.

The changes in the amount of employment in March, 1916, as compared with February, 1916, and with March, 1915, are given in two tables presented below. While these tables are in continuation of those first presented in the January Review, it should be borne in mind that establishments which furnished comparable information for March, 1916, and February, 1916, are not in all cases the same ones which furnished comparable figures for March, 1916, and March, 1915. The scope of the work has been enlarged by the addition of the industry of cigar manufacturing.

The table for February, 1916, and March, 1916, shows that the number of employees in all industries, except cotton manufacturing and woolen, was greater in March, 1916, than in February, 1916. The decrease in both of these industries is negligible, being less than one-tenth of 1 per cent in the woolen industry, while in the cotton manufacturing industry the decrease is only 0.2 per cent. The amount of money paid to employees was greater in all industries in March, 1916, than in February, 1916, ranging from 1 per cent increase in the woolen industry to 7.9 per cent in the car building and repairing industry.

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COMPARISON OF EMPLOYMENT IN IDENTICAL ESTABLISHMENTS IN FEBRUARY, 1916, AND MARCH, 1916.

Industry.	Estab- lish- ments to which in- qui- ries were sent.	Estab- lish- ments report- ing for Feb- ruary and March.	Period of pay roll.	Employees.		Earnings.			
				Number on pay roll in—		Per cent of in- crease (+) or de- crease (-).	Amount of pay roll in—		Per cent of in- crease (+) or de- crease (-).
				Febru- ary, 1916.	March, 1916.		Febru- ary, 1916.	March, 1916.	
Boots and shoes.....	88	65	1 week....	53,779	53,928	+0.3	699,067	710,423	+1.6
Cotton manufacturing...	92	60	...do.....	56,759	56,647	-.2	516,943	525,010	+1.6
Cotton finishing.....	19	17	...do.....	14,191	14,451	+1.8	162,114	165,538	+2.1
Hosiery and underwear..	83	56	...do.....	29,265	29,973	+2.4	277,102	285,827	+3.1
Woolen.....	26	19	...do.....	19,443	19,438	-(1)	211,661	213,695	+1.0
Silk.....	64	47	2 weeks...	22,027	22,578	+2.5	478,798	496,633	+3.7
Men's ready-made cloth- ing.	86	29	1 week....	13,630	13,633	-(1)	168,420	172,311	+2.3
Iron and steel.....	139	95	½ month...	118,268	120,901	+2.2	4,211,272	4,272,717	+1.5
Car building and repair- ing.	74	40	...do.....	48,172	49,221	+2.2	1,482,969	1,600,734	+7.9

¹ Less than one-tenth of 1 per cent.

From an examination of the table giving number of employees and their earnings for March, 1916, and March, 1915, it will be noted that the number of employees in March, 1916, was greater in all industries than in March, 1915, except in the cotton manufacturing and cigar manufacturing industries. The greatest increase shown in the number of employees on the pay roll in March, 1916, over March, 1915, was in the car building and repairing industry, where the increase was 36.9 per cent. More money was paid out to employees in all the industries listed, in March, 1916, than in March, 1915. The greatest increase in the amount of the pay roll was in the iron and steel industry, where employees received 60.3 per cent more money in March, 1916, than in March, 1915. The smallest increase shown is 4.6 per cent for the cotton-manufacturing industry.

COMPARISON OF EMPLOYMENT IN IDENTICAL ESTABLISHMENTS IN MARCH, 1915, AND MARCH, 1916.

Industry.	Estab- lish- ments to which in- qui- ries were sent.	Estab- lish- ments report- ing for March, both years.	Period of pay roll.	Employees.		Earnings.			
				Number on pay roll in—		Per cent of in- crease (+) or de- crease (-).	Amount of pay roll in—		Per cent of in- crease (+) or de- crease (-).
				March, 1915.	March, 1916.		March, 1915.	March, 1916.	
Boots and shoes.....	88	72	1 week....	49,377	59,552	+20.6	\$554,671	\$786,363	+41.8
Cotton manufacturing...	92	63	...do.....	61,244	60,311	-1.5	530,040	554,163	+4.6
Cotton finishing.....	19	17	...do.....	12,873	14,451	+12.3	137,347	165,538	+20.5
Hosiery and underwear..	83	59	...do.....	28,970	32,742	+13.0	241,230	307,188	+27.3
Woolen.....	26	20	...do.....	17,547	19,660	+12.0	168,014	216,461	+28.8
Silk.....	64	48	2 weeks...	20,179	21,695	+7.5	397,783	473,706	+19.1
Men's ready-made cloth- ing.	86	39	1 week....	17,299	18,849	+9.0	199,575	246,158	+23.3
Iron and steel.....	139	103	½ mon,h...	105,190	143,318	+36.2	3,223,996	5,167,920	+60.3
Car building and repair- ing.	74	51	...do.....	44,449	60,839	+36.9	1,293,637	1,963,810	+51.8
Cigar manufacturing.....	107	74	1 week....	24,086	22,432	-6.9	224,736	240,616	+7.1

In addition to the data presented in the above tables for number of employees on the pay roll, 85 plants in the iron and steel industry reported 112,475 employees as actually working on the last full day of the pay period reported for in March, 1916, as against 81,546 for the reported pay-roll period in March, 1915, an increase of 37.9 per cent. Returns furnished by 83 establishments in the same industry for March, 1916, and February, 1916, show that 97,002 employees were actually working on the last full day of the pay period reported for in March, 1916, as against 94,474 for the reported period in February, 1916, an increase of 2.7 per cent.

EMPLOYMENT IN THE STATE OF NEW YORK IN MARCH, 1916.

The New York State Industrial Commission receives monthly reports concerning the number of employees and wages paid in the principal manufacturing establishments of the State. As this State ranks first in manufacturing, the returns are of much significance. A statement concerning conditions in March, 1916, issued by the commission, reads as follows:

The factories of New York State in March paid out 2 per cent more in wages than in February of this year and 30 per cent more than in the corresponding month of 1915. Although March made only a small gain over the record volume of business transacted the previous month, nothing is disclosed by the pay rolls of February or March to indicate that the tremendous boom in manufacturing in this State has reached its height. These facts are brought out by * * * reports received from 1,275 representative manufacturing establishments, with nearly a half million employees, scattered throughout the State. * * * Each industry group in the State did a larger volume of business in March of this year than in March of 1915, the greatest gain over a year ago being in the metals, machinery, and conveyances group.

The stone, clay, and glass products group paid 10 per cent more wages in March than in February, the increase being mostly in the glass industry and in the miscellaneous stone and mineral products industry.

The metals, machinery, and conveyances group showed practically no change in volume of business between February and March. The group as a whole in March employed 35 per cent more operatives and paid out 51 per cent more wages than one year ago. Marked increase in activity between February and March was shown by the gold, silver, and precious stones industry, by rolling mills and steel works, by concerns fabricating structural and architectural iron, by establishments manufacturing cutlery, tools, and firearms, by manufacturers of general machinery, and by railway repair shops and manufacturers of railway equipment. Less business was recorded by concerns manufacturing automobiles and parts and by boat and ship builders. A large part of the decrease in the automobile industry was due to a serious labor dispute in Buffalo. The metals group as a whole is maintaining the marked gain over last year in volume of business made during the winter.

The wood manufactures group paid 4 per cent more wages in March than in February. The improvement was most marked in the sawmill and planing mill

industry. The group as a whole was 20 per cent more active in March of this year than in March of 1915.

The furs, leather, and rubber goods group reveals a slight increase in activity between February and March, the improvement being largely among boot and shoe manufacturers, among manufacturers of miscellaneous leather and canvas goods and in the fur-working industry. The only decrease in activity was reported by concerns tanning leather. The group as a whole paid out in March 35 per cent more in wages than a year ago.

Although the chemicals, oils, and paints group recorded practically no change in volume of business between February and March, the group is doing a fourth more business than one year ago.

The paper-making industry was slightly less active in March than in February. The printing and paper goods group in March paid 5 per cent more wages than in February and 11 per cent more than in March of 1915.

The textiles industry showed almost no change between February and March, still employing a sixth more operatives and paying a fourth more wages than one year ago. The clothing, millinery, and laundering group recorded a most important increase in volume of business between February and March, total wages paid being 4 per cent greater. The most important gains within the group were recorded by the women's clothing industry, by the women's underwear and furnishings industry, and by the miscellaneous sewing industry. In March the clothing group was employing 4 per cent more operatives and paying 12 per cent more wages than one year ago. The improvement over last year was most striking in the men's clothing industry, in the men's shirts and furnishings industry, and in the miscellaneous sewing industry.

The food, liquors, and tobacco group paid in March 5 per cent more wages than in February. The most marked increase in business was shown by the miscellaneous grocery industry, inclusive of salt and sugar refining, by bakeries, and by confectionery establishments. Decreases in volume of business were reported by the flour, feed, and cereal industry, and by the slaughtering industry. The group, as a whole, in March did 12 per cent more business than one year ago.

REPORT OF THE MAYOR'S COMMITTEE ON UNEMPLOYMENT, NEW YORK CITY.¹

The Mayor's Committee on Unemployment, appointed on December 2, 1914, seeks, in its report, to summarize its experience with unemployment during the winter of 1914-15. It also presents information regarding similar efforts elsewhere, and discusses various constructive measures tried in Europe and America to reduce the evil of unemployment and to minimize its distressing effect. This report is divided into four parts: (1) Work accomplished, (2) program for dealing with unemployment in New York City, (3) constructive proposals for an immediate program, and (4) appendixes. Subcommittees considered particular phases of the program, as follows:

1. Facts regarding existing unemployment.
2. Immediate private and public employment opportunities.

¹ New York City. Report of Mayor's Committee on Unemployment. January, 1916. 100 pp. Illustrated.

3. Relief needs and measures.
4. Unemployment among women.
5. Cooperation of business and industry to promote employment.
6. National, State, and municipal policies.
7. Emergency workrooms for men.

For the purpose of ascertaining the number of persons employed on full time and on part time during the week ending December 19, 1914, as compared with the corresponding week in December, 1913, the committee sent a questionnaire to representative employers in all branches of industry in the city. The results of this inquiry were summarized in Bulletin 172 of this bureau, "Unemployment in New York City."

The demands upon relief societies for care and support are suggested as an index of general unemployment conditions. Summing up the comparative data for the fiscal years 1912-13, 1913-14, and 1914-15, the figures show that the average monthly number of families cared for by the four large relief societies in the city was 8,192, 10,108, and 12,915, respectively. The amount expended for material relief for each of these fiscal years was \$433,684, \$495,458, and \$668,575. The average number of families under care in 1913-14 and 1914-15 was 23 per cent and 57 per cent, respectively, more than the number cared for in 1912-13, while the expenditures for relief increased 14 per cent and 70 per cent, respectively.

In order to relieve, by offering emergency employment, the acute distress of the winter of 1914-15, the mayor's committee opened 22 workrooms in which employment was given to as many as 5,000 persons daily, the expense being met by funds raised and administered by the committee. In these workrooms those who could not be placed for the time being in regular employment were given jobs for five days a week, the hours being from 10 to 3. A "tide over" wage of 50 cents a day and a noonday lunch were received by the men; 60 cents was paid to each woman worker. All thus employed were encouraged to seek regular employment. The men were engaged in rolling bandages, making other surgical supplies, chair-caning, cabinetmaking, cobbling, furniture repairing, raffia weaving, rug weaving, basketry, in the manufacture of flytraps for the health department, and in the making of toys and other wooden articles. The women made women's and children's garments by hand, including blouses, petticoats, small dresses, kimonos, and boys' blouses. A rummage committee collected old paper, discarded furniture, and other household supplies. The paper and other marketable waste were sorted and baled. The furniture and other material having a salable value were repaired by the unemployed. The revenue from the sale of paper, furniture, and miscellaneous articles, amounting to \$1,103.92, was used to employ more men in the remunerative

branches of the work. Nothing made in these workrooms was sold in the market. Many of the garments made by the women went to the families of those who worked on them. Hospitals, settlements, and relief societies received a share of what was made. The report thus summarizes the work accomplished:

The 13 men's workrooms employed 8,558 different men for a total of 138,686 days' work from January 28, 1915, to April 16, 1915. The four women's workrooms employed a daily average of 886 women for a total of 51,720 days' work from January 21, 1915, to April 30, 1915. These totals include a daily average of 26 women employed for a total of 5,642 days' work as supervisors, cutters, forewomen, and helpers who, except for three individuals, were themselves among the unemployed who would otherwise have been in distress. The five workrooms conducted by the rummage committee employed 1,629 men and women for a total of 25,023 days. The 22 workrooms gave a total of 215,429 days' work over the period during which the workrooms were operated.

Training classes, covering instruction in stenography, office work, bookkeeping, clerical work, the trades, needlework, and domestic science, were organized for the benefit of girls out of work in order to render them more efficient in the employment to which they might be sent. "Scholarships" of 60 cents a day for a 5-day week were provided so that the girls might be "tided over" while being trained. Over 1,000 different girls were reached in the various classes; 448 were placed in regular employment, "some at double their former wages, because of the additional training received." Six thousand dollars was appropriated by the mayor's committee to pay for the scholarships.

A special study made of the records of 305 (30.7 per cent) of these girls indicated that 59 per cent were unemployed because of business conditions; that 37 per cent were between 16 and 18 years of age, 43 per cent of those in the trades being between these ages and 30 per cent being less than 16 years of age; and that 45 per cent had left school at or below the eighth grade. It was found that 23 per cent had been engaged in manufacturing and mercantile pursuits, 15 per cent in domestic and personal service, and 56 per cent in clerical work. The greatest handicap under which the girls were suffering appeared to be poverty. Only 8 per cent boarded. Of those living at home, 67 per cent contributed all of their earnings to the support of the family.

In only 13, or 5 per cent, of the families of the girls living at home was the girl the only wage earner. Thirty-two per cent of the families had one other wage earner, 37 per cent two others, and 25 per cent three or more others. In 25 per cent, however, of the families with one other wage earner, that one was unemployed; in 35 per cent of the families with two other wage earners one of these two was unemployed, and in 7 per cent both were unemployed; of the families with three or more wage earners 37 per cent had one unemployed, 18 per cent two unemployed, 12 per cent three unemployed, and 3 per cent four unemployed. Of all the families for whom information was obtained, 16 per

cent had no wage earner employed, and 30 per cent had one or more wage earners out of employment. The importance of the contribution of the girl to the support of her family is evidenced by these figures.

That a system of training classes for unemployed girls can help to remove some of these handicaps seems a self-evident fact. Insufficient general education can be supplemented. Lack of technical education can be supplied. Information can be given as to industrial conditions and opportunities, and proper facilities for securing employment can be provided in connection with the classes.

The successful placement by the Young Women's Christian Association of 76 per cent of the girls who went through their scholarship classes last winter, with one-third of that number placed at a higher wage than they had formerly earned, is an indication of the real value of this form of continuation class, and a proof that they fulfill a need for supplementary training which is disclosed upon examination of the records of a majority of the girls studied.¹

Over 2,000,000 articles of clothing were distributed to approximately 300,000 persons in Manhattan and The Bronx as a result of bundle day on February 4, 1915. In this connection an emergency workshop was conducted where 400 workers were paid \$1 per day. The committee received and disbursed \$15,526.48.

In discussing the securing of regular employment, mention is made of the city and State public employment bureaus, the former being opened in November, 1914. From the date of opening to January 1, 1916, 66,043 persons were registered for employment and 12,306 jobs were filled. Employers called for 19,494 persons, of whom the number given above (12,306) are known to have been definitely employed. An appropriation of \$800 was made by the mayor's committee to assist the municipal bureau in its advertising and publicity work.

In order to stimulate employment or mitigate unemployment, appeals were made by the committee to private employers and also to the Building Trades Employers' Association urging its members to distribute among the largest number of individuals practicable the work then available by working them in shifts or in alternate weeks rather than permitting some men to become wholly unemployed, and to give preference of employment to married men. The effect of this appeal was that about four weeks later 2,400 more men were employed under this arrangement than previously. Supplementing the work of the other agencies, the report states that the police department found places for 2,811 men and women in 103 different occupations. Only 11 per cent of the jobs, it is believed, were temporary. The mayor's committee succeeded in federating representatives of public and private noncommercial employment bureaus with a view to working out a cooperative program for the correlation of the work and the

¹ The report of the committee for vocational scholarships of the Henry Street Settlement for 1915 shows that "the amount of wages earned by scholarship children averages twice that earned by an equal number of children of the same age who have received no special training."

prevention of duplication and overlapping. A meeting of a group of executives responsible for the employment policies of some of the largest business and industrial establishments in the city was arranged, the purpose being to talk over their relation to problems of management in industry as they affect the securing, training, and maintaining of a regular labor force. Many churches conducted emergency workshops both independently and in conjunction with the mayor's committee, and Sunday, January 31, 1915, was observed as "unemployment Sunday," when the clergymen of the city preached on this general subject.

In presenting the program for dealing with unemployment, the committee recognized the prime necessity of taking steps to prevent such a condition, for "after employment has been lost it is obviously more difficult to prevent the distress that follows." The unemployed are placed in four classes "sufficiently accurate to afford a sound basis for a constructive policy."

1. Those who have recently been and normally are in long-time jobs—who have "steady jobs," such as engineers, railway employees, clerks in wholesale and retail trade, etc.

2. Those who, when employed, shift from job to job, or from employer to employer—the seasonal workers, such as those in the building trades, contractor's laborers, and in similar occupations.

3. Those whose employment is from day to day, or from hour to hour, who do not work by the week, but are subject to dismissal on a moment's notice—the casual laborers, such as workers along the docks, handy men, and odd-job men of all kinds.

4. Those who are unable to perform regular labor, whether because of sickness, old age, or some physical handicap, and those who have drifted into becoming tramps or loafers, "can't-works," and "won't-works"—the so-called unemployables.

The report states that the first and most important need for preventing unemployment among those out of long-time jobs is the proper development of efficient machinery for making known the needs of employers in all parts of the city and of the country for workers and bringing such employers and workers together. To this end public employment exchanges are suggested, which must not only meet the problems of seasonal employment and decasualization of labor but must exercise the real function of an employment bureau, namely, organizing the employment market so as to prevent seasonality in industry from resulting in seasonal unemployment. The subject of the development of public employment bureaus was thoroughly considered by a conference called by the mayor's committee, and the following statement briefly summarizes the conclusions and recommendations of this conference:

Public bureaus can perform a most useful and necessary function in centralizing and pooling the demands of all employers, particularly in casual and seasonal occupations, thereby stabilizing employment and concentrating regular

employment for the largest number of weeks throughout the year on individual workmen, so that they may become regular employees in the industry though not always regularly employed by a single employer. The bureaus when performing their function as the central organized labor market of a community will prevent much unemployment by making prompt connections between the job and the worker.

The State and municipal bureaus should keep in daily contact with each other by the interchange of information as to unfilled employment opportunities in either bureau and as to such other matters as experience may prove expedient.

In the extension of the work of both the municipal and State bureaus throughout the greater city, there should be kept constantly in mind the desirability of all the employment bureaus within the city of New York being operated ultimately as part of a single system under a single management.

The management of both bureaus should work out, in conference, a plan for the development and extension of the work of each, the territory in which each will operate, the establishment of branches and cooperating centers, in accordance with the needs of the city and the ability of each bureau to serve a particular section or accomplish a given result.

The public employment bureau must be promoted from the public point of view on business principles. Its approach must be that it seeks to place workmen in employment because they are industrially capable for some particular industrial opportunity, not merely because they are unemployed. To both employer and employee it acts as a time saver and an acceptable medium of approach. The city and State governments are justified in investing money in this enterprise because it will work in the interests of business and social efficiency and economy.

Public employment bureaus should be located so as to be readily accessible to employers in the various centers of business and industry.

The close cooperation of all noncommercial employment agencies, both public and private, will result in the development of effective cooperative methods, such as the clearing (preferably through the public bureaus) of all unfilled orders from employers and a unified policy of solicitation of employers, publicity, etc.

Steps should be taken as promptly as possible to develop the juvenile departments of the public exchanges.

There should be an advisory committee of employers and employees whose duty should be to make the bureaus known to a wider circle and to insure their fuller development.

There should be a national system of employment exchanges to act as a coordinating and correlating agency to link up the city and State bureaus with each other and to supplement and standardize activities of local communities.

To offset any falling off in employment as a result of business depression, the committee strongly recommends a serious effort to promote a method of planning public employment and expenditure for a period of from 7 to 10 years so that a certain percentage each year shall be postponed to be undertaken in years of extraordinary unemployment. How this plan has been worked out in foreign countries is briefly described.

A study of individual industries where attempts have been made by employers to cut down fluctuations in employment led the committee to conclude that it is not at all impossible to regularize employ-

ment and that this is more particularly true in the highly organized industries in which facilities exist for study of the conditions of manufacture, the state of the trade, and means of marketing the product. It is only necessary to plan for steadiness of employment, it is asserted.

Unemployment insurance, it is suggested, may exert a great influence in preventing unemployment, and the report outlines briefly how this has been worked out in England. It is believed that this subject should be brought forcibly to the attention of leaders of opinion in industry, politics, and government, and that information should be gathered as to the operation of out-of-work benefits among trade-unions in this country. Unemployment insurance is suggested as a relief measure also.

The various systems in Europe are here grouped under three heads:

Compulsory insurance, the insurance being compulsory for certain classes of workers.

Provided voluntary insurance, the insurance being provided by public authority or somebody other than the insured persons, and being usually open to workers in general.

Autonomous voluntary insurance, the insurance being organized and administered by the insured themselves, such insurance associations being generally restricted to persons following the same or allied trades.

A somewhat detailed description of the British National Insurance Act of 1911 and of the Unemployed Workmen Act of 1905 are included in the report. The experience of other European countries and of cities in this country in providing relief measures for unemployment are briefly recited.

Part III of the report is devoted to constructive proposals for an immediate program. Believing that irregularity of employment and unemployment should receive constant attention and study, it is recommended that a new mayor's committee be appointed ¹ to deal constructively with the problem of unemployment and prepare against a recurrence of unemployment crises. The plan of organization suggested is as follows:

Central committee: Consisting of about 20 members.

Executive committee: Consisting of general chairman, general secretary and chairman of subcommittees.

Subcommittees dealing with definite phases of the problem:

1. Investigations—

a. Securing facts.

Special studies and investigations of irregularity of employment and seasonal employment and casual labor should be made, and a fact center on employment data maintained.

b. Supervising investigations.

Supervise special investigations, required by other committees (if desired) and initiate studies and inquiries related to unemployment made by public, educational, civic and other investigating bodies.

¹ A new committee was appointed by the mayor on Jan. 25, 1916.

Subcommittees dealing with definite phases of the problem—Continued.

2. Seasonality and irregularity of employment—

- a. Seasonal industries.
- b. Irregularity of employment.

These subjects should receive special attention as among the most important aspects of the problem of unemployment as it affects industry. This subcommittee should be representative of influential interests in industry, particularly "seasonal industries." It should study, with constructive ends in view, the problem of seasonality and irregularity of employment in the more important industries of the city.

c. Employment policies in representative industries.

Special effort should be made to cooperate with the new Society for the Study of Employment Problems (employment managers' association), bringing to the attention of the employers of New York the desirability of studying their own employment problems, of cutting down the labor "turn over" and of developing regularity and continuity in the labor force.

3. Public policy—

a. Developing public employment bureaus.

Special consideration should be given to assisting in developing the public employment bureaus, encouraging and assisting them in securing cooperation from the employing public, and in obtaining adequate financial support.

b. Organizing schemes for decasualizing casual labor.

Preliminary inquiries have been made of representatives of the International Longshoremen's Association and of employing interests, in part, from which we believe that an organized employment scheme for dock laborers in New York is possible of achievement. Steps in this direction should be undertaken. This proposal suggests efforts which can be made in other industries employing casual labor.

c. Federating noncommercial employment agencies.

A study has been made of the private noncommercial employment bureaus as the basis of the coordination and correlation of the placement work now being done by all these agencies. Conferences are being held between bureaus serving similar classes of applicants to promote the best methods of cooperation.

d. Planning public expenditures to compensate for decreased private employment during trade crises.

At a conference of mayors of New York State, held in June, 1915, the general secretary of the mayor's committee introduced a resolution for the appointment of a committee of five mayors to report a practical program for carrying out this suggestion.

e. Unemployment insurance.

The basis upon which unemployment insurance can be undertaken in New York City and New York State, as well as the nation at large, should receive careful consideration. * * * Knowledge of unemployment insurance of other countries should be brought to the attention of the citizens of New York.

Subcommittees dealing with definite phases of the problem—Concluded.

4. Industrial training and vocational guidance—¹

a. Industrial training.

An industrial survey of the city to precede the adoption of a general scheme of industrial education, has been authorized. This survey, it is urged, will enable the board of education, in planning the course of study in industrial subjects, to take fully into account existing employment opportunities.

b. Study of private commercial schools and their effect on unemployment.

The decidedly superficial character of the training received by unemployed girls in these schools suggests the necessity of a study of the effect on unemployment of turning out a horde of illy-equipped commercial workers.

c. Vocational help to minors.

The opening up of constructive employment opportunities for minors through vocational guidance is an extremely important aspect of the problem of preventing unemployment.

d. Training the unemployed.

5. Relief and emergency employment—

a. Cooperation and coordination of relief.

A permanent association or federation of relief and appropriate public welfare agencies should be organized to function promptly in unemployment crises. The general program of such an emergency body and the part assigned to each cooperating organization in such a program, should be worked out as far as practicable in advance. The example of the National Red Cross, with existing relief societies as auxiliaries and working units, illustrates the advantage of preparedness when emergencies arise. Organizations other than the large relief societies should be brought into this plan, as complete success will depend upon a unified city-wide program supported by all agencies capable of participation.

b. Emergency employment.

A satisfactory plan of emergency employment would be one of the problems to be worked out by the proposed federation of relief and welfare agencies.

c. Loan fund and credit union.

An attempt should be made to promote a central loan or credit union plan which would be self-sustaining and self-perpetuating.

d. Homeless men and vagrancy.

The knitting together of various voluntary religious and philanthropic organizations and the municipal lodging house in dealing with homeless men, and the further development of plans already under way for industrial work in the municipal lodging house may need the cooperation of this committee.

Under the direction of the mayor's committee a study was made of the relation between children and unemployment, based on information secured from the department of health, under whose supervision work certificates are granted. In the period from January 1 to

¹ Specific recommendations on this subject are presented on p. 25.

April 15, 1914, 4,020 children applied for work papers and in the corresponding period of 1915 the number was 4,505, an increase of 12 per cent. Of 1,011 children interviewed, 42.4 per cent reported that the head of the family was unemployed at the time of the investigation, while of 2,167 wage earners in the families represented, 24.6 per cent were unemployed. Only 36 per cent of 805 children who had attended public school were graduated. Two-thirds of the children urged the necessity of their earnings, either in the family support or in self-support, as the reason for their not continuing in school. It was found that most of the idleness among wage earners in these families occurred in January and February and affected the clothing and building trades. The committee concluded that, notwithstanding other factors, financial hardships in the families caused by the existing crisis were responsible for taking so many children from school for the purpose of contributing to the family income.

In Appendix II are presented recommendations of the conference on methods and means of training the unemployed:

1. Establishment of a juvenile department of the municipal employment bureau to work in close cooperation with the public schools.

2. Enlargement of opportunities for vocational training before children enter upon any kind of work, so that all possible guidance and training may be given previous to the taking of a job.

3. Establishment of trade annexes (or continuation schools) for three types of workers:

- a. For wholly unskilled workers, especially adolescents, who alternate between odd jobs and periods of drifting about. Not only should training be provided for these children, but they should be required to be in school during periods of unemployment.

- b. For those who are out of work because they find themselves unfit for or imperfectly adjusted to their chosen work. Such schools should offer opportunity for new lines of training.

- c. For workers who are temporarily unemployed because of shifting business conditions (seasonal work, contraction of industry due to business crises, etc.) both in commercial and industrial lines. Such schools should provide supplementary training in accordance with the different trades and commercial pursuits to enable workers to utilize their periods of unemployment for industrial and commercial advancement.

4. Further development of a system of tests * * * for the purpose of determining the relation between employment and temperamental, educational, and physical qualifications of seekers after positions. Schools giving such tests should work in close affiliation with employment agencies, so that the agencies might have their applicants for positions tested, to determine their fitness for the type of work desired. All organized effort for special training, tests, etc., as a means of permanently bettering conditions of unemployment should be under the department of education.

5. Organization of a cooperating social-service committee representing the private noncommercial employment agencies and other philanthropic groups

which will provide funds for "scholarships" and "student aid." The amount of "scholarships" and "student aid" should be flexible and administered in accordance with the needs of the student.

The committee recommends immediate action along certain specific lines outlined above, and the report suggests that steps are being taken to carry out the above plan in full. A beginning has been made.

REPORT ON UNEMPLOYMENT IN ONTARIO.¹

The Ontario commission on unemployment, which was appointed to examine into the permanent causes of recurring unemployment in the Province and to recommend measures to mitigate or abolish the evil, made inquiries into the extent and character of unemployment, the work of public and private employment offices, the methods adopted by municipal authorities in dealing with unemployment, and unemployment in women's occupations. In a report recently issued the results of these inquiries are presented in four parts: (1) Conclusions and recommendations. (2) Data in regard to unemployment in Ontario. (3) Studies in representative women's employments. (4) Evidence taken before the commission. Nearly half of the report is devoted to a presentation of conclusions and recommendations.

Based on the returns on employment during 1914 received from 651 Ontario manufacturers, showing that the decrease in the volume of employment was equal to the full working time of at least 30,000 persons, not including unskilled labor and the building trades, the commission arrived at the following general conclusion:

General well-being is dependent upon the largest possible production with a fair distribution of rewards. This would increase the demand for manufactured goods and increase the manufacturers' profit, for his success depends upon the purchasing power of the public. It appears, therefore, (1) that the cutting down of production, which means the power to purchase, is detrimental both to capital and labor; (2) that the larger the power to purchase possessed by labor, the greater will be the ultimate advantage of the manufacturer who caters to his wants; (3) that the greater the prosperity of the laborer (as illustrated by the ownership of his own home) the less necessity will there be for him to overwork, and consequently the greater will become the demand for the labor of others.

In taking up provisions dealing with the prevention of unemployment, the report states that the proper adjustment between work and the number and qualification of the workers is the one genuine remedy; and to this end the greater recognition of the general problem of proportionate national development as a means of securing

¹ Canada. Report of the Ontario Commission on Unemployment, Toronto, 1916. 334 pp.

stability of labor conditions is urged. "Individual effort is necessarily inadequate to cope successfully with economic tendencies and organized influences. The more widely a division of responsibility is recognized, the more speedily will that united action be secured, through which alone can be found effective remedies." The commission believes that public work and expenditures should be so planned as to compensate for a lessened private demand for labor. It is pointed out, however, that employers themselves may largely regularize their staffs of workers—

(1) By improved methods of employment and training, which will lessen the present large "turn over" of employees; (2) by adding new lines of products to insure greater continuity of employment; (3) by standardizing a portion of products, thereby making it feasible to manufacture for stock more largely in slack seasons; (4) by securing orders from customers longer in advance than is now the practice, so that the factory output may be made more uniform; and (5) by developing export trade, which would not only stabilize the labor market and employ our excessive industrial plant, but would help to redress an adverse balance of trade and at the same time stimulate production for home consumption.

The commission recommends a policy of community and assisted land settlement in order to develop natural resources and assist in restoring industrial activities. The establishment of provincial farms and training schools for agricultural laborers is suggested as a means of lessening unemployment and of training for employment, and this contemplates a plan by which settlers may devote part time to their own work and part time to wage earning in the employ of the Government. These plans, it is believed, would not involve uneconomic expenditures; on the contrary, the whole settlement policy would be to link closer together all expenditures—public and private—in order to insure economic and speedy units of production.

In a chapter on provisions dealing with the mobility of labor, the commission recommends the establishment of a system of provincial labor bureaus and outlines some of the services which would thus be rendered to workmen. A provincial labor commission, upon which workmen and employers should be fairly represented, is recommended, its duties being—

(1) To administer a system of free public employment bureaus; (2) to control private employment offices; (3) to cooperate with rural and urban committees in regard to vocational guidance, extension of the school age, development of local rural interests, and the extension of technical, trade, agricultural, and domestic training; (4) to develop an adequate system of statistics; (5) to interpret these statistics so that the causes of unemployment and other features of labor problems may be more generally understood, and that constructive measures of prevention may be brought to the attention of workmen, employers, and the public authorities; (6) to bring the knowledge and experience

of other countries to bear upon Canadian labor problems; (7) to further the organization of provincial employment bureaus throughout Canada with a view to their ultimate linking together in an effective national system.

Declaring that the volume of immigration has an important influence upon conditions of labor in every industry, the report emphasizes the need of further controlling, guiding, and stimulating it, and of taking advantage of the present slackening of immigration to organize effectively all agencies which will insure the reception of those only who are fitted and required to supplement existing activities, and thus preserve the labor market from future serious disorganization. Certain proposals, intended to perfect the work of the department of immigration, are presented; also proposals relating to an imperial migration board to be organized in London (England), whose primary duty would be to distribute information regarding opportunities in the Dominions, their demand for labor, and the facilities and cost of transport.

The commission made a survey of unemployment in six women's occupations, namely, the house worker, the factory worker, saleswomen, stenographers, trained nurses, and women who work by the day, these groups representing about 135,000 employees. Estimating that other employments bring the total up to about 175,000 the report states that unemployment in 1914-15 was experienced by between 8,000 and 10,000 women workers, judging from the amount of unemployment found in the occupations studied. The reasons ascribed for this condition are lack of training, indifference, and inefficiency. Reference is made to the work of employment bureaus, the general unanimity of opinion as to the need for vocational guidance, the importance of health as a factor in satisfactory employment, the advantage of domestic training, mothers' pensions, and the necessity for instruction in the management and spending of the family income. Considerable emphasis is placed on the importance of the care of children as an employment for women, the result of which, it is asserted, would be to reduce infant mortality by at least one-half. The commission urges a careful statistical study of the state of employment for women in the country. All women are strongly urged to interest themselves, both as individuals and in organizations, in such matters as the practical education of girls, vocational guidance, after-care committees for young workers, women workers' associations, the training and organization of house workers, the advocacy of thrift, the use of small gardens, and the recognition of home making and the care of children as occupations. The commission believes that the important position in paid employments now occupied by women is imperfectly appreciated, that the effect of this employment upon home life and the care of children is far-

reaching, and that there is necessity, therefore, to train women both for wage-earning occupations and home duties.

The commission is of the opinion that much unemployment occurs in the transition from the school to paid employment. Improved juvenile training and vocational guidance under the direction of education authorities are given as important measures of prevention. By amending the act regulating attendance at school and by providing for vocational guidance, it is believed that much may be done to lessen the number of misfits and improve the position and future outlook of many industrial workers. It is proposed that all primary schools supported by the public funds be required to provide facilities for domestic and manual or agricultural instruction, and that the school age be raised so as to leave with the parent the choice either (*a*) of leaving the child in school until the fifteenth birthday; or (*b*) of placing the child in an industrial, agricultural, or domestic school from the fourteenth to the fifteenth birthday; or (*c*) of removing the child from school at the present school age, for an industrial, agricultural, or domestic pursuit, to be combined with part-time industrial, agricultural, or domestic instruction until the sixteenth birthday.

Asserting that it is the fringe of the unemployed which directly thwarts the effort constantly made by labor to secure a fair remuneration and greater certainty of regular employment, the commission recommends industrial centers for the physically handicapped, for whom specially designed occupations may be developed, and for the aged, but not infirm, capable in proper surroundings of earning at least a measure of self-support. Similar provision is suggested for the destitute casual laborer. An extension of the present system of industrial prison farms is proposed for vagrants and for the indolent who prefer casual labor.

In presenting provisions for the relief of unemployment it is stated that workmen connected chiefly with building trades are subject to irregular employment, owing to the seasons, and for these unemployment insurance, with Government assistance, is advocated. This assistance should be open to all voluntary associations of workmen organized for the purpose of securing unemployment benefit. "The scheme must be contributory, for only by insisting rigorously, as a necessary qualification for benefit, that a sufficient number of weeks' contribution shall have been paid by each recipient can we possibly hope to put limits on the exceptionally bad risks." The British national insurance act is suggested as a model. A better organization of charitable activities is recommended, with a view to coordinating all preventive and remedial efforts.

In Part II data regarding unemployment in Ontario are presented in six chapters: (1) Extent and duration of unemployment, (2) vagrancy, (3) distribution of labor, (4) public employment bureaus, (5) the control of public expenditures, and (6) the land problem of Ontario. Of 1,637 ¹ factories to which schedules were sent on May 20, 1915, 651 tabulatable replies were received, covering three years, 1912 to 1914, inclusive. It was found that the average number employed in the 651 factories was 73,259 in 1912, 78,077 in 1913, and 65,698 in 1914, indicating a decline of 15.8 per cent in the volume of employment in 1914. Estimates are given of the average number employed in all factories in 14 groups of industries, and these show a weighted average decline of 11.8 per cent in 1914. The largest decline, 27.1 per cent, was in iron and steel products; food products and tobacco and its manufactures showed an increase in employment of 10.2 per cent and 50 per cent, respectively. The distribution of employment by sex is represented in the following table, the figures being estimated:

DISTRIBUTION OF EMPLOYMENT BY SEX, SHOWING THE PER CENT OF INCREASE, 1913 OVER 1912, AND THE PER CENT OF DECREASE, 1914 OVER 1913.

Sex.	Number employed.		Per cent of in-crease, 1913 over 1912.	Number employed, 1914.	Per cent of de-crease, 1914 over 1913.
	1912	1913			
Males.....	166,013	175,069	5.4	152,372	12.4
Females.....	56,421	58,478	3.7	53,734	8.1
Total.....	222,434	233,547	5.0	206,106	11.8

From the above it appears that the greater risk of unemployment is among the men, which is due to large fluctuations in industries in which very few women are employed, particularly in the iron and steel industry.

Conditions of employment in every branch of industry have been affected by the war, but the difficulty of indicating to what extent unemployment has resulted from the war, from restriction of credit which began more than a year before war was declared, and from industrial depression due to other causes is recognized. A table is presented showing that in the 651 factories tabulated the average number employed in the last six months of 1914, during which the war was in progress, was 14.5 per cent less than the average number employed in the first six months of that year, indicating the effect of the war. On the other hand, the average number employed,

¹ The report suggests that one possibility of error must be noted and allowed for before the results can be taken as an index of actual conditions. The number of industrial establishments in Ontario, which had increased since 1901, was, excluding hand trades, 7,780 in 1911. Thus, the 1,637 factories to which the request was sent by the commission represent only 21 per cent of all industrial establishments in the Province.

January to June, 1914, was 11.4 per cent less than the average number employed in the first six months of 1913, and 6.9 per cent less than the average number employed in the last half of 1913, indicating the effect of causes other than the war. It is explained, however, that the conditions in the latter half of 1914 can not be taken as an index of the distress existing at that time, since of about 45,000 workers who had been discharged from the factories many had enlisted. It is concluded that had there been no war, with its concomitant distress, the volume of unemployment in manufacturing industries alone would have equalled the full working time of more than 20,000 persons, which does not necessarily mean that this number was continuously out of work. No special study was made of the duration of unemployment, but based upon admittedly inaccurate and incomplete data collected in three previous inquiries the commission reports that the average period of unemployment was from 12 to 15 weeks, this being uniformly true where skilled workers predominated and where laborers formed the great majority.

In its study of vagrancy as related to unemployment, the commission classified 670 men found in the shelters in Toronto, Ottawa, Hamilton, and London as (1) bona fide workmen traveling in search of employment, (2) those willing to undertake casual labor but who object to or are not fitted for any continued work, (3) the habitual vagrant, and (4) old and infirm persons, many of whom are crazy and all of whom live by begging. Of the 670 only a few were placed in the first class, conservatively estimated at 5 per cent; the "proportion belonging to the fourth class is by no means small." Conditions in the four cities are compared, the ratio of vagrancy per 1,000 population for each specified age being shown. The following statement indicates the conclusion of the commission:

It appears that the vagrants do not form a homogeneous body, but consist of several kinds of men, calling for separate treatment; that the bulk of them are unwilling to take up steady work; and that, in general, they are somewhat older and less capable of self-support than the normal population. * * * It appears that their numbers are continuously recruited by immigration and industrial depression and that good workers in the prime of life are driven downwards into vagrancy; that the vagrant is nobody's business, wanders from place to place, and does not get proper treatment anywhere; that public opinion opposes a more stringent application of the law, perhaps because it is felt that there is not yet adequate provision for the vagrant class.

In its investigation of the distribution of labor in Ontario the commission found that the six agencies which attempted to find work for those without employment secured more than 70,000 situations in 1914, about 85 per cent of the work being done by private effort through agencies working for profit; some of it is philanthropic. The employment secured by these six groups of agencies, two being

Federal, two provincial, one municipal, and one private, is distributed as follows:

NUMBER AND PER CENT OF THOSE OUT OF EMPLOYMENT WHO RECEIVED AID THROUGH FEDERAL, PROVINCIAL, MUNICIPAL, AND PRIVATE EMPLOYMENT AGENCIES, 1914.

Agency.	Number.	Per cent.
Salaried immigration officials.....	6,007	8.5
Canadian Government employment agents.....	¹ 2,136	.....
Provincial employment offices.....	1,923	2.7
Department of colonization.....	1,835	2.6
Toronto registration bureau.....	801	1.2
Private employment agencies.....	60,000	84.9
Total.....	70,636	100.0

¹ This number is included in the 6,007 above and is therefore omitted in arriving at the total.

The Federal Government agents work on a commission and almost three-fourths of the work was done by one-fourth of the agents. The provincial government agents receive a salary of \$300, and like the other agents are permitted to do other work. The department of colonization places farm laborers almost entirely and its system is declared to be the most complete. The commission states that the Toronto employment bureau “has departed from the first condition of the successful working of any employment office—that of sending the men best fitted to the job, instead of sending the man whose need appears to be the greatest. Only by following the former policy can the confidence of employers be secured.” In so far as private agencies deal with immigrants they are under the control of the Dominion Government; others are not under Government supervision. It is estimated that the cost to the Province of the 98 philanthropic and commercial private agencies was about \$57,000, while the joint income of the 55 which reported was, in 1914, approximately \$38,000. Under an order in council passed in May, 1913, these agencies are regulated as follows:

1. A license must be obtained from the superintendent of immigrants.
2. These licenses, for which no fee is charged, are not transferrable and may be revoked by the superintendent.
3. Every holder of a license shall keep in a book the full name and address in Canada, and home address of every immigrant with whom he deals, reporting date of immigrant's arrival, name of steamship or railway by which he came, name and address of his next of kin, name and address of the employer to whom he goes, nature of the work, and rate of wages and other terms of employment.
4. The fee charged shall in no case exceed \$1.
5. No engagement shall be made unless the agent has a written and dated order from the employer stating exactly his demands.
6. If any license holder be convicted of an indictable offense, his license shall, ipso facto, be canceled.

7. If any holder of this license fail to comply with these regulations he shall be liable, on summary conviction, to a penalty of not more than \$100, or three months' imprisonment.

The report cites several instances of fraud practiced by these private agencies, chiefly upon immigrants.

In a chapter on public employment bureaus, the report presents in detail a description of the systems in Germany, Great Britain, and Massachusetts, asserting that two things are vital to the good service of a system of labor exchanges, namely, that they shall command the confidence of both employers and employees, and that they shall be administered by men and women of real devotion and business ability who can turn the system to good account. A general policy is advocated, followed by an outline of the methods of selecting officials, and the plan by which the agencies are controlled.

In support of the statement that unemployment can in a measure be prevented by the judicious control of public expenditures, the commission undertakes to show that if spent with this end in view they would help materially to counterbalance the falling off in the demand for labor when ordinary business declines. It is explained that in England the first economic effect of the outbreak of war was a large increase in unemployment which was partly met by the use of a fund available for road building.

The prevention of unemployment in this country by the control of public expenditure will therefore depend, in part, on the machinery for measuring local changes in employment. When this shows that conditions are abnormal, such public works as are available can at once be started. It does not follow, however, that useful public work will be available in quantities sufficient to absorb all idle workers. In so far as trade depressions, coming at irregular intervals, and with uncertain intensity, prevent the systematic planning of expenditure in future years, all measurements of changes in the volume of employment, whatever their usefulness in other directions may prove to be, will be found useless for this purpose.

After presenting tables showing that periods of industrial depression and consequent unemployment have recurred about every seven years, both in England and Canada, the commission concludes that plans should be made to meet this condition by a proper control of public expenditure.

As a means of relieving the embarrassment created by a condition of unemployment in industrial centers, the commission emphasizes the value of adopting a policy of encouraging land settlement by immigrants. It is stated that a surprisingly large number of foreigners with farm experience, upon landing in Canada, secure employment as laborers without knowledge of the opportunities offered them by the immense farm areas in the Dominion. How best to meet this situation is discussed in a chapter on land settlement, in which

are outlined several schemes that have been tried with varying success. Considerable attention is given to policies adopted in Australia and New Zealand, the statement being made that in the former country, during 20 years following 1891, a great mass of land-settlement legislation was enacted by every State making it possible for intending settlers to secure land on easy-term payment, borrowing from the Government a large part of their working capital. As a result of this policy the population in the capital cities in 1911 was only 39 per cent of the total, while the population in the rural districts has materially increased.

Part III of the report is devoted to studies of representative women's occupations, including the house worker, the factory worker, the saleswoman, the trained nurse, and women working by the day. A concluding chapter presents replies and statistics from reformatory and penal institutions for girls and women. It is perhaps sufficient to present here the recommendations made by the commission as a result of its findings in connection with each employment. The conditions disclosed by these inquiries may be deduced, in part at least, from the nature of the recommendations which are intended to be corrective as well as constructive.

The houseworker.—(a) Training schools to be established in connection with existing welcome hostels for immigrant women intending to be houseworkers and certificates granted to competent workers. (b) Training classes (with certificates to graduates) to be established in connection with technical schools and in other schools where such arrangements are possible. (c) Part-time courses of training, with certificates, to be arranged for houseworkers in positions. (d) The provincial employment bureau to cooperate with these training schools and classes.

The factory girl.—Your commissioners recommend that the provincial labor commission undertake the following work: (1) An inquiry into seasonal employments. (2) A study of factory employment with a view to learning how far the training obtained from work in factories gives skill that insures employment, along with other conclusions as to the desirability of factory employments for women; an inquiry to be made as to what special training for factory workers can be provided in schools. (3) To cooperate with the employment departments of factories for the purpose of improving employment methods. (4) To require factories to furnish statistics regarding number of employees and such other matters as may be considered desirable by the commission.

The saleswoman.—Your commissioners recommend that the government pass legislation to secure the following: Classes in salesmanship in technical schools; and that the provincial labor commission undertake the following work: (1) To cooperate with the employment departments of stores for the purpose of improving employment methods. (2) To require stores to furnish statistics regarding number of employees and such other matters as may be considered desirable by the commission.

The stenographer.—Your commissioners recommend that the Government should pass legislation to secure the following: No business college to be allowed to teach without license from the department of education. Such schools and

colleges to be inspected and required to maintain a standard of teaching to be fixed by the department; and that the provincial labor commission undertake the following work: To require private employment offices for stenographers to maintain a uniform test in proficiency before registering applicants, and a minimum standard in age.

The trained nurse.—Your commissioners recommend that the provincial labor commission undertake the following work: An inquiry as to whether the nursing profession is becoming overcrowded, and if hospitals should continue to graduate trained nurses at the present rate. Data to be collected as to the number of Canadian nurses trained in the United States who return to practice in Canada.

Women who work by the day.—Your commissioners recommend that the provincial labor commission undertake the following work: A study of the employment of women who work by the day, with a special view to the effect on the workers' children; the employment of office cleaners to be studied with a view to determining whether it may not be a more suitable and advantageous employment for men.

Reformatory and penal institutions for girls and women.—Your commissioners recommend that the prison-farm system, which has been begun for women prisoners, be extended as speedily and widely as practicable, with an indeterminate sentence, and that inmates of reformatories who have no trade receive training in some skilled occupation.

The appendixes include special studies on the subjects of labor exchanges in the United Kingdom, calculations of probability, the regularization of industry by employers, local government in Great Britain and Canada, mental defect as a cause of unemployment, relief and philanthropy, immigration, unemployment and thrift, unemployment and the liquor problem, immigration and employment, and unemployment.

There are also tables showing the number of manufacturing operatives employed during three years in 651 factories in Ontario and tables relating to vagrancy in Toronto, Hamilton, Ottawa, and London.

STRIKES AND LOCKOUTS FROM SEPTEMBER, 1915, THROUGH MARCH, 1916.

According to data compiled from various sources by the United States Bureau of Labor Statistics, the number of strikes and lockouts during the six months September, 1915, to February, 1916, inclusive, was 845, and for the six months October, 1915, to March, 1916, inclusive, 805.

The following table, which has been corrected for months previous to March, 1916, as reports have come in during the latter month, shows the number of strikes and lockouts begun in each of the months of September, 1915, to March, 1916, inclusive, but excluding 36 strikes and 6 lockouts which started during months not

specified. The strikes and lockouts were distributed among the months as follows:

NUMBER OF STRIKES AND LOCKOUTS, SEPTEMBER, 1915, THROUGH MARCH, 1916, BY MONTHS.

Kind of dispute.	Septem-ber.	October.	Novem-ber.	Decem-ber.	January.	Febru-ary.	March.
Strikes.....	146	102	102	70	147	148	180
Lockouts.....	14	7	10	8	8	4	7
Total.....	160	109	112	78	155	152	187

A brief account of the character of the strikes occurring from September, 1915, to January, 1916, may be found in preceding numbers of the REVIEW.

Though the number of strikes reported during the two months of February and March is large, the importance of the strikes is much less than usual. Munitions strikes still continue to occur, nearly all of which have been for increase in wages. Though a general increase in wages was secured last fall and in the early part of the winter, the increase in the cost of living has been the main argument urged in favor of a still further increase in wages, many of the strikes having occurred in establishments where increases had been recently voluntarily made by employers. This was especially true in Massachusetts, where the mill strikes have been short and participated in by comparatively small numbers of unorganized men, who were generally foreigners. In Buffalo, N. Y., there have been several strikes of machinists. In Chicago and cities in Indiana and Michigan strikes against leading band instrument makers have been made. The Alaskan railroad strike called attention to the efforts that the Government is making to connect the mines of the Matanuska region with civilization. That the substitution of a new agreement in place of the protocol in the cloak, suit, and skirt industry in New York last spring has not tended to keep peace in that industry is evidenced by the series of strikes in February, involving upwards of 75,000 persons. In Colorado the enactment of a statute requiring 30 days' notice to be given before a strike can be legally called resulted in the quick ending of two strikes of smeltermen called in ignorance of the existence of the law.

The data in the tables which follow relate to 402 strikes and lockouts concerning which information was received by the bureau during the months of February and March, as follows: One hundred and eighty strikes and 7 lockouts occurring in March, 148 strikes and 4 lockouts in February, 38 strikes and 3 lockouts in January, 2 strikes and 1 lockout in December, and 16 strikes and 3 lockouts, for which the dates of commencement were not reported. In the tables

that follow 9 strikes and 1 lockout are counted with the March strikes and lockouts, and the rest are counted with those of February, making 197 considered in the former month and 205 in the latter. Inasmuch as strikes which start toward the end of a month are frequently not brought to the attention of the bureau until after the report for the month has been prepared, it is probable that the corrected figures for the month of March will show a material increase over the number of strikes herein reported for that month.

Most of the disputes reported during February and March were in the northeastern section of the country, and all but 31 in each month were in States east of the Mississippi and north of the Potomac and Ohio Rivers.

STATES IN WHICH FIVE OR MORE STRIKES AND LOCKOUTS OCCURRED DURING EITHER FEBRUARY OR MARCH, 1916.

State.	February.			March.		
	Strikes.	Lockouts.	Total.	Strikes.	Lockouts.	Total.
New York.....	37	.....	37	43	2	45
Pennsylvania.....	29	1	30	17	1	18
New Jersey.....	21	1	22	17	.....	17
Massachusetts.....	19	.....	19	23	.....	23
Ohio.....	17	1	18	11	2	13
Connecticut.....	11	.....	11	9	.....	9
Missouri.....	8	2	10	7	.....	7
Illinois.....	8	1	9	9	.....	9
Indiana.....	4	3	7	4	.....	4
Michigan.....	5	.....	5	7	.....	7
Rhode Island.....	2	1	3	5	.....	5
Washington.....	3	.....	3	5	.....	5
Wisconsin.....	3	.....	3	4	1	5
Other States.....	28	.....	28	28	2	30
Total.....	195	10	205	189	8	197

In February, 12 strikes were confined to women and 15 included both men and women; in March, 14 strikes were confined to women and 8 included both men and women, as did also one lockout.

The industries in which five or more strikes and lockouts were reported were as follows:

NUMBER OF STRIKES AND LOCKOUTS IN SPECIFIED INDUSTRIES, REPORTED DURING FEBRUARY AND MARCH, 1916.

Industry.	February.			March.		
	Strikes.	Lockouts.	Total.	Strikes.	Lockouts.	Total.
Building trades.....	8	3	11	13	.....	13
Cigar makers.....	7	.....	7	.....	1	1
Clothing industries.....	20	.....	20	24	.....	24
Iron and steel mills.....	8	.....	8	5	.....	5
Metal trades.....	36	.....	36	32	3	35
Mining.....	22	.....	22	5	.....	5
Printing trades.....	4	2	6	1	.....	1
Railroads.....	14	1	15	15	.....	15
Street railways.....	2	.....	2	4	1	5
Stoneworkers.....	4	1	5	11	.....	11
Teamsters.....	11	1	12	1	.....	1
Textile workers.....	17	.....	17	14	.....	14
Miscellaneous.....	42	2	44	64	3	67
Total.....	195	10	205	189	8	197

Included in the above are: For February, 6 strikes of machinists, 18 of molders, and 18 of coal miners; and for March, 19 strikes and 1 lockout of machinists and 8 strikes and 1 lockout of molders.

In February the employees in 126 strikes and 8 lockouts were connected with unions; in 26 strikes they were not so connected; and in 10 strikes they were not connected with unions at the time of striking, but organized themselves into unions as a result of the strike. In March the employees in 93 strikes and 7 lockouts were connected with unions; in 10 strikes and 1 lockout they were not so connected; and in 10 strikes they were not connected with unions at the time of striking, but organized themselves into unions as a result of the strike. In the remaining strikes and lockouts it was not stated whether the employees had union affiliations or not.

In 168 disturbances in February and in 182 in March the causes were given. In about 72 per cent each month the question of wages or hours or both was the main issue in dispute. The leading causes are shown in the following table:

PRINCIPAL CAUSES OF STRIKES AND LOCKOUTS REPORTED DURING FEBRUARY AND MARCH, 1916.

Cause.	February.			March.		
	Strikes.	Lockouts.	Total.	Strikes.	Lockouts.	Total.
Increase of wages.....	69	4	73	80	1	81
Decrease of wages.....	2		2	4	1	5
Decrease of hours.....	2		2	4		4
Wages and hours.....	19		19	23		23
General conditions.....	12		12	7		7
Conditions and wages.....	10	1	11	6		6
Conditions, wages, and hours.....	4		4	4		4
Recognition of the union.....	8	2	10	9	2	11
Recognition and wages.....	4		4	5		5
Recognition, wages, and hours.....	4	1	5	4		4
Open or closed shop.....	3		3	3		3
Discharge of employees.....	6		6	11	1	12
Because nonunion men employed.....	2		2	5		5
In regard to the agreement.....	3		3	3		3
Jurisdictional.....	3		3			
Sympathetic.....	2		2			
Miscellaneous.....	7		7	8	1	9
Not reported.....	35	2	37	13	2	15
Total.....	195	10	205	189	8	197

In 90 of the strikes in February the number of persons involved was reported to be 150,837, an average of 1,676 per strike. In 18 strikes, in each of which the number involved was over 1,000, the strikers numbered 134,800 persons, thus leaving 16,037 involved in the remaining 72 strikes, or an average of 223 each. In 3 lockouts the number of persons involved was reported as 425, or an average of 142 each. In 88 of the strikes in March the number of persons involved was reported to be 45,570, an average of 518 per strike. In 13 strikes, in each of which the number involved was over 1,000, the strikers numbered 29,950 persons, thus leaving 15,620 involved in

the remaining 75 strikes, or an average of 208 to each. In 6 lockouts the number of persons involved was reported as 1,353, or an average of 226 in each.

Only one employer was concerned in each of 157 strikes and 7 lockouts in February, while in 17 strikes the number of employers struck against was more than 1. In March only 1 employer was concerned in each of 155 strikes and 8 lockouts, while in 9 strikes the number of employers struck against was more than 1.

Sixty-seven strikes and 6 lockouts were reported as ending in February. The duration of 46 strikes was given as 1,160 days, or an average length of 25 days for each strike. If 6 strikes are omitted from consideration, each of which lasted for more than 3 months, the average length of the remaining 40 strikes was 11 days. Three lockouts lasted 369 days, or an average of 123 days each. Sixty-one strikes were reported as ending in March. The duration of 45 strikes was given as 1,276 days, or an average length of 28 days for each strike. If 2 strikes are omitted from consideration, each of which lasted for nearly a year, the average length of the remaining 43 strikes was 13 days. The results in 55 strikes and 5 lockouts ending in February and 52 strikes ending in March were given as follows:

RESULTS OF STRIKES AND LOCKOUTS ENDING IN FEBRUARY AND MARCH, 1916.

	February.			March.		
	Strikes.	Lockouts.	Total.	Strikes.	Lockouts.	Total.
Won.....	12	.....	12	23	.....	23
Compromised.....	25	1	26	21	.....	21
Lost.....	15	4	19	2	.....	2
Employees returned pending arbitration..	3	.....	3	6	.....	6
Total.....	55	5	60	52	.....	52

RETAIL PRICES OF FOOD IN THE UNITED STATES.

Reports to the Bureau of Labor Statistics from approximately 725 retail dealers in 44 of the principal industrial cities of the United States covering the principal staple articles of food show that for the month from January 15 to February 15, 1916, the price of food, taken as a whole, declined 2 per cent. This drop was almost entirely due to a sharp decline in the price of eggs, which are of great importance in the consumption of the average family, and are therefore heavily weighted in the food index. The only other article to decline in price from January to February was butter.

A table showing the relative retail prices of food on January 15, 1915, and on February 15, 1916, is given herewith. The relative numbers given are simply percentages in which the average price for the entire year 1915 is taken as the base, or 100 per cent.

RELATIVE RETAIL PRICES OF FOOD ON JAN. 15 AND ON FEB. 15, 1916.

[Average price for the year 1915=100.]

	Jan. 15, 1916.	Feb. 15, 1916.		Jan. 15, 1916.	Feb. 15, 1916.
Sirloin steak.....	100	100	Milk, fresh.....	101	101
Round steak.....	99	99	Flour, wheat.....	95	99
Rib roast.....	100	100	Corn meal.....	99	99
Chuck roast.....	99	99	Rice.....	100	100
Plate boiling beef.....	99	100	Potatoes.....	153	158
Pork chops.....	93	96	Onions.....	117	127
Bacon, smoked.....	101	101	Beans, navy.....	117	119
Ham, smoked.....	104	105	Prunes.....	98	98
Lard, pure.....	99	100	Raisins, seeded.....	101	101
Hens.....	104	107	Sugar, granulated.....	102	104
Salmon, canned.....	100	100	Coffee.....	100	100
Eggs, strictly fresh.....	124	102	Tea.....	100	100
Butter, creamery.....	107	106			
Cheese.....	105	107	All articles combined...	106	104

Another table shows the relative prices on January 15 each year from 1912 to 1916, with the average for the year 1915 taken as the base.

RELATIVE RETAIL PRICES OF FOOD IN FEBRUARY OF EACH YEAR, 1912 TO 1916,
AS COMPARED WITH AVERAGE PRICES FOR THE YEAR 1915.

[Average price for the year 1915=100.]

	Feb. 15, 1912.	Feb. 15, 1913.	Feb. 15, 1914.	Feb. 15, 1915.	Feb. 15, 1916.
Sirloin steak.....	81	93	98	97	100
Round steak.....	78	90	100	97	99
Rib roast.....	85	94	100	98	100
Chuck roast.....			104	99	99
Plate boiling beef.....			102	101	100
Pork chops.....	80	93	104	88	96
Bacon, smoked.....	85	95	99	99	101
Ham, smoked.....	89	97	101	99	105
Lard, pure.....	92	104	106	104	100
Hens.....	93	100	107	100	107
Salmon, canned.....				100	100
Eggs, strictly fresh.....	118	93	107	99	102
Butter, creamery.....	111	115	100	105	106
Cheese.....				101	107
Milk, fresh.....	98	101	103	101	101
Flour, wheat.....	83	80	78	110	99
Corn meal.....	90	91	95	101	99
Rice.....				100	100
Potatoes.....	171	102	122	94	158
Onions.....				97	127
Beans, navy.....				98	119
Prunes.....				101	98
Raisins, seeded.....				100	101
Sugar, granulated.....	101	84	78	98	104
Coffee.....				100	100
Tea.....				100	100
All articles combined.....	95	95	99	99	104

All meats for which information was secured for the five years from February, 1912, to February, 1916, were higher in February, 1916, than in February, 1912; also lard, milk, flour, corn meal, and sugar. Food as a whole was 9 per cent higher in February, 1916, than in February, 1912.

Between February, 1915, and February, 1916, only five articles—plate boiling beef, lard, flour, corn meal, and prunes—declined in

price. Potatoes, which showed the greatest advance from February, 1915, to February, 1916, were still 8 per cent lower in February, 1916, than in February, 1912.

While the price of food as a whole was the same in February, 1912, and February, 1913, it advanced 4 per cent as between that date and February, 1914. It was the same in February, 1914, and February, 1915, with another advance, 5 per cent, between February, 1915, and February, 1916.

LIVING CONDITIONS OF SELF-SUPPORTING WOMEN IN NEW YORK CITY.¹

Before entering upon the building of a boarding home or hotel for girls in the Borough of Manhattan, New York City, the Metropolitan Board of the Young Woman's Christian Association, in March, April, and May, 1915, made a study of living conditions of self-supporting women, including those residing in organized homes, in furnished rooms, with private families, or in apartments of their own, the purpose being to find an answer to each of the following questions:

1. To what extent is the need for such a boarding place met by the houses already in existence?
2. What results are accomplished by these houses in terms of their social and economic influence, and in connection with this test, of their work, what are the advantages and disadvantages of their policies?
3. What is the need which is not now being met? How do girls live who are alone in New York and who are not living in one of these homes?
4. What type of girl ought to be reached in the Young Women's Christian Association plan? In general, what range of wages ought the directors of the house to have in mind, and what proportion of such wages might be expected to be paid in board?
5. In what district or districts of the city are such houses needed?
6. Is a fair-sized hotel the most desirable from the point of view of its social results, or would it be more desirable to have several smaller houses in the nature of clubs, similar to the Eleanor Association in Chicago?
7. What are the most successful experiments in this line in other cities?

The results of this study and certain conclusions and recommendations are presented in a 96-page pamphlet recently issued, which includes also an appendix detailing life in 15 organized homes as experienced by a trained investigator who spent from three days to two weeks in each home in an effort to ascertain from the girls themselves just to what extent these places are meeting the need of the

¹ A Study of Living Conditions of Self-supporting Women in New York City, by Esther Packard. Metropolitan Board of the Young Women's Christian Association, 1915. 96 pp. Illustrated.

girls away from home and in what respect they are failing in this purpose. The investigation included 54 organized, noncommercial¹ homes capable of accommodating 3,599 girls. The report says:

The good which these homes do in providing safe and comfortable living places for girls who would otherwise have to live in furnished-room houses can hardly be estimated. They have proved of vital service in the lives of hundreds of girls, and the testimony which many residents, especially the younger girls, offer as to the effect of the congenial surroundings must indeed be gratifying to the boards of managers and house superintendents. Those parents who see their daughters start off to the city to begin their "research magnificent" must feel a cause for serious anxiety removed, when they know that these daughters are safely located in a home with pleasant surroundings and congenial associates.

From only 140 girls in 7 homes was it possible to secure data through personal interview, but this was supplemented by the records of the homes which, although incomplete, or not open to inspection, furnished considerable data concerning several hundred girls. As to living conditions of girls not reached by these homes a certain amount of information was secured for 842, of whom 535 were personally seen, 206 living in furnished rooms or boarding houses, 292 boarding with private families, and 37 housed in small apartments of their own. The following table presents the nationality, ages, occupations, and wages of the girls in the homes and those adrift, showing the per cent under each specified item.

NATIONALITY, AGES, OCCUPATION, AND WAGES OF GIRLS IN THE HOMES AND THOSE ADRIFT, SHOWING NUMBER AND PER CENT UNDER EACH SPECIFIED ITEM.

Item.	Girls in homes.		Girls adrift.	
	Number.	Per cent.	Number.	Per cent.
Nationality:				
American.....	232	28.0	133	15.8
English.....	205	24.7	14	1.7
German.....	119	14.4	38	4.5
Irish.....	104	12.5	59	7.0
Italian.....	6	.7	114	13.5
All others.....	163	19.7	484	57.5
Total.....	829	100.0	842	100.0
Age:				
Under 16 years.....	2	.6		
16 and less than 19.....	44	12.3	97	11.5
19 and less than 22.....	80	22.3	150	17.8
22 and less than 26.....	86	24.0	138	16.4
26 and less than 31.....	72	20.1	128	15.2
31 and less than 36.....	31	8.7	46	5.5
36 and less than 41.....	14	3.9	19	2.3
41 and over.....	29	8.1	10	1.2
Not reported.....			254	30.2
Total.....	358	100.0	842	100.0

¹ This term is used in an informal sense. A few homes make a profit and pay dividends of 4 per cent or 5 per cent to stockholders. Their aim, however, is social, not commercial, and in that lies the difference between them and the ordinary furnished room or boarding house.

NATIONALITY, AGES, OCCUPATION, AND WAGES OF GIRLS IN THE HOMES AND THOSE ADRIFT, SHOWING NUMBER AND PER CENT UNDER EACH SPECIFIED ITEM—Con.

Item.	Girls in homes.		Girls adrift.	
	Number.	Per cent.	Number.	Per cent.
Occupation:				
Office workers, stenographers.....	252	21.0	107	12.7
Servants, domestic helpers, etc.....	249	20.7	172	20.4
Teachers, kindergartners, governesses.....	207	17.2	17	2.0
Nurses.....	114	9.5	15	1.8
Factory workers.....	71	5.9	199	23.6
Department store employees.....	62	5.2	194	23.0
All others.....	246	20.5	138	16.4
Total.....	1,201	100.0	842	100.0
Wages:				
Under \$4.....	7	2.2	6	.7
\$4 and less than \$7.....	73	23.2	167	19.8
\$7 and less than \$10.....	102	32.5	355	42.2
\$10 and less than \$13.....	83	26.4	169	20.1
\$13 and less than \$16.....	31	9.9	63	7.5
\$16 and less than \$21.....	17	5.4	37	4.4
\$21 and over.....	1	.3	20	2.4
Not reported.....			25	3.0
Total.....	314	100.0	842	100.0

In addition to the more personal information secured by interviews with the girls, investigation was made of 500 furnished rooms in order to afford a more thorough understanding of the work and opportunity of the organized homes. It was found that many of the homes have certain restrictions as to age, nationality, wage, and occupation of the girls admitted, and the time during which they may remain in the home. Some have religious restrictions. The whole problem of closing hours, rules, and regulations was found to be one of the most difficult which the homes have to meet. The girls appear to recognize the need for certain restrictions, but object to definite rules "stuck up in your face all the time." In several homes a spirit of self-government prevails, but the investigation seems to show that it can not be forced upon the girls, and in some cases where it was tried the plan broke down utterly.

Of 51 homes reporting, 27 have no age restrictions, 2 have an age limit of 25 years, 3 of below 25, 5 of 30, 13 of 35, and 1 of 40. Of 358 girls in 8 homes, 12.9 per cent were less than 19 years of age, 66.4 per cent were 19 and less than 31, and 20.7 per cent were 31 and over. Two of the homes will not take girls who earn more than \$8 a week, 1 has a limit of \$9, 5 limit the wage to \$10, 7 to \$12, 3 to \$15, 1 to \$17, and 2 to \$18, while 30 have no wage restriction. Data obtained for 314 girls in 12 homes show that 182, or 57.9 per cent, were receiving less than \$10 a week, while 80, or 25.4 per cent, were receiving less than \$7. Twenty-eight per cent of the girls scheduled are American, with English (24.7 per cent), German (14.4 per cent), and Irish (12.5 per cent) following in the order named; the remainder (20.4 per cent)

represent 20 other nationalities. Of 1,201 girls in 15 homes, 252 (21 per cent) were office workers and stenographers, 249 (20.7 per cent) were servants, and 207 (17.2 per cent) were teachers, kindergartners, and governesses, the remainder (41.1 per cent) being scattered among 20 other occupations.

It was found that only 5 of the 54 organized homes were entirely self-supporting. Most of the homes frankly appeal to the public for help, and, although intended primarily for the girl earning low wages, admit girls "earning well above what economists say is a living wage." For instance, in 10 subsidized homes the investigation showed that 41.6 per cent of 286 girls were earning above \$10 a week. The price the girls are required to pay for board and room in these homes varies from \$2.80 to \$12 a week. Where the house is subsidized and thus able to offer board at a price far below the ordinary commercial rate, the claim is advanced by some that the effect on the girls is detrimental, since it tends directly to reduce their wages. Testimony is offered in support of this view. The girls themselves, feeling that a subsidy is in the nature of a charity, appear to be opposed to the plan, although some were found who took the attitude expressed by one girl, who said: "A home should not depend for support on the earnings of hard-working girls. The homes are advertised as charity. Let us, therefore, get as much out of them as we can." The ability of a house to meet expenses depends very largely, it is pointed out, upon the management; the number accommodated and the price paid have comparatively little to do with it. Mention is made of three entirely self-supporting houses accommodating 38, 40, and 45 girls, respectively, where the prices are from \$4 to \$6 a week for three meals a day, while one heavily subsidized place accommodates many hundred girls and charges from \$4.25 to \$10. Detailed expenditures of three self-supporting homes are presented, the following apportionment being typical:

	Per cent.
Rent.....	23
Salary and wages.....	21
Food.....	40
Light and heat.....	8
Repairs and replenishing.....	5
Sundries.....	1
Balance.....	2
Total.....	100

The receipts and disbursements for one month and for the year 1914-15 of the Eleanor Associations, a similar enterprise in Chicago, are given in full, showing the percentage of expenditure and cost per capita.

In order to determine why many girls fail to take advantage of these homes, why they apparently prefer ordinary commercial rooming houses, what class or classes of girls need accommodations the most, and in short, what need is not now being met, an investigation of living conditions of girls adrift was planned. The inquiry was not confined to any one class nor to any wage level. As already suggested, 842 schedules¹ were secured representing diverse nationalities and occupations, almost every wage level and ages from 14 to 55. The kind of firms cooperating in this study resulted in a preponderance of factory workers (23.6 per cent) and department-store employees (23 per cent). Approximately 16.4 per cent of these girls were in the 22 to 26 age group, and 513 (60.9 per cent) were under 31 years of age. Nearly 63 per cent were receiving less than \$10 a week and more than 20 per cent were receiving less than \$7. Of the 535 girls who were personally interviewed those living in furnished rooms received a higher wage than those living with private families. Also, it was found that of 159 in the group receiving less than \$7 a week by far the largest proportion, 144, or 90.5 per cent, were compelled to live with private families, relatives, or friends who were willing to "knock off on the price." The following table indicates the weekly wage of 535 girls living away from home:

WEEKLY WAGE OF 535 GIRLS LIVING AWAY FROM HOME IN NEW YORK CITY, CLASSIFIED BY MODE OF LIVING.

Weekly wage.	Living in furnished rooms.		Living with private families.		Living in apartments.		Total.	
	Number.	Per cent. ¹	Number.	Per cent. ¹	Number.	Per cent. ¹	Number.	Per cent. ¹
Less than \$4.....			3	1.0	3	8.1	6	1.1
\$4 and less than \$7.....	10	4.9	141	48.3	2	5.4	153	28.6
\$7 and less than \$10.....	103	50.0	105	36.0	9	24.3	217	40.6
\$10 and less than \$13.....	53	25.7	30	10.3	12	32.4	95	17.8
\$13 and less than \$16.....	19	9.2	6	2.1	6	16.2	31	5.8
\$16 and less than \$20.....	11	5.3	1	.3	3	8.1	15	2.8
\$20 and over.....	1	.5					1	.2
Not reported.....	9	4.4	6	2.1	2	5.4	17	3.2
Total.....	206	100.0	292	100.0	37	100.0	535	100.0

¹ Although this table is taken from the report, the per cents have been changed in some instances because of inaccuracy of original figures.

Of 119 living in furnished rooms and reporting, the largest number (28.6 per cent) paid \$6 and less than \$7 for room and board, while of 205 living with private families and reporting, the largest number (37.6 per cent) paid less than \$4 a week. It was found, however, that the low-wage girl had to pay a higher per cent of her wages for board and room than the girl earning a better wage.

¹ See table on pp. 42 and 43.

Of 423 girls, 260, or 61.5 per cent, spent more than 50 per cent of their wages for room and board. Of this number 132, or 50.8 per cent, were receiving less than \$10 a week, and 85, or 32.7 per cent, were receiving less than \$7.

The report discloses conditions in 500 furnished-room houses. It was found that preference is given to men roomers, that in only 26 houses was there a public parlor where the roomers could entertain their friends; that houses changed hands many times in brief periods, making it dangerous to recommend them unless an investigation is made frequently, and in general, that, as one landlady expressed it, "Danger obviously lurks everywhere in a furnished room locality. With the system of subletting flourishing, with roomers coming and going, with no public parlor in which to entertain friends, is it any wonder that the moral conditions in many rooming houses are decidedly bad?" The testimony of several girls is given, indicating the loneliness of furnished-room life. It was found that accommodations vary greatly for the same price. The price for single rooms ranges from \$2 to \$6 a week, with the average about \$3, which secures a very good room in some sections of the city, and "a tiny hall bedroom, shabbily and meagerly furnished," in other sections.

One of the features of the investigation was to discover why girls are not living in the homes. The one reason heard most frequently was the fear of restrictions. "I don't know which is worse," declared one girl, "the cramped and awful loneliness of a hall bedroom or the humiliating and soul-depressing charity and rules of a home." Another reason was the "fear of gossip and everybody knowing your own personal affairs." The testimony of the girls may be thus summed up—

Tell the Y. W. C. A. to build a place where girls like me can feel they really belong, where we can have one or two rooms by ourselves and a place, no matter how small, that's really our own. I guess I'd stay there forever if they'd let me. I'm so tired of this drifting around.

Of those living with private families the report says:

It would be quite misleading to convey the impression that all low-wage girls who live with private families are better situated than if they were living in homes. Living conditions, almost indecent, and moral dangers, certainly very grave, oftentimes confront girls boarding with strangers.

Living in small apartments was found to be the most ideal for these girls. The report says:

For real economy in living, economy combined not with shocking overcrowding and evil conditions, but with a normal and happy mode of life, one must turn to the woman who rents an apartment, does her own work, and buys her food at the lowest possible prices.

Of the 37 girls interviewed who were keeping house it is declared that not one would change her way of living. These apartments may be had for as low as \$2.25 a week, and the cost of food for those girls who bought their own supplies and cooked their own meals was \$2 to \$2.50 a week for two meals a day.

From this investigation of living conditions it is definitely concluded that—

1. There is need for further suitable housing accommodations for self-supporting women.

2. There is need for a house where meals would be optional.

3. The institutional atmosphere which is bound to result when even 40 girls live together offers no real, permanently satisfying solution of the problem of living.

4. The blind but nevertheless very real prejudice against organized homes in the minds of no small number of girls brought out the fact that if a new home were built there would always be a considerable class whom no amount of argument could induce to live in such a place.

5. There was constantly shown throughout the investigation the deep longing on the part of wage-earning women for "a home of their own."

These facts, declares the report, point "toward a socialized apartment house for women, with apartments ranging in size from one room and kitchenette to several rooms; a cafeteria open to the public as well as to residents of the house; a large reception room on the main floor, surrounded by several smaller and more private reception rooms; and a socially minded woman superintendent in charge." It is believed that the training which such a place would offer in real home making is no minor argument in its favor. "The home instinct is strong in nearly all women; and if it is a precious thing, as so many people would have us believe, is it not right that it should have some means of expression? It may even be that the restlessness among wage-earning women, of which we hear so much nowadays, can in some part be laid to inadequate living accommodations. Certainly if women are increasingly entering industry, to be there permanently, there should be some adequate provision made for them. Such an undertaking as the proposed socialized apartment house will be, if it proves nothing else, a valuable social experiment."

Examples furnished in the course of the investigation by the numerous model tenement buildings which have apartments designed for families renting as low as \$2.25 a week per room, and which pay dividends to stockholders of 4 per cent and 5 per cent, led to the conclusion that apartments in this proposed building could be rented at a price within the range of wage-earning women and still be entirely self-supporting.

REPORT OF NEW YORK STATE COMMISSION ON VENTILATION.

This commission was appointed in June, 1913, and began actual experimental work in the following December. Its duty was "to examine and investigate the subject of ventilating systems in the public schools and other public buildings of the State and the proper installation of the same, to the end that a thorough and effective system, which will assure an adequate supply of fresh air under the best conditions, will be maintained." The need for such a commission was suggested by the governor, who in appointing it said:

Even the most fundamental facts which must lie at the basis of any efforts to ventilate our school buildings have not been scientifically determined by any experiments which have been made thus far. It is not known, for example, and can not be known without more adequate experiments than have been possible up to this time, what temperature should be maintained in public-school buildings. Indeed, it has not even been proven whether a constant temperature or a varying temperature is more beneficial. We do not know scientifically what degree of humidity should be maintained in our schoolrooms.

All of these questions in regard to school ventilation are equally important as to factory ventilation.

The efforts of the commission during the first year were devoted mainly to a study of the effect on the body of temperature and chemical purity of the air.¹ This was the initial step in carrying out the program of determining the relative importance of the different factors in ventilation, namely, temperature, humidity, air motion, chemical composition, odor, dust, and bacteria. The commission realized that four atmospheric conditions produce, or are supposed to produce, unfavorable effects upon those exposed to them: High heat, alone or combined with high humidity, chemical effluvia of various sorts resulting from human occupancy, drafts or exposure to cold air, and air of unduly low humidity, and it determined to make a careful study of the physiological effect of all four of these conditions. Experiments were carried on in the College of the City of New York, four subjects being placed in the observation room for periods varying from three and one-half to eight hours a day. In all, 93 different subjects were under observation. Describing the plan pursued, the commission says:

The physiological condition of the subjects was determined at the beginning and the end of the day's routine and at intermediate periods by observations of body temperature, blood pressure and pulse, standing and reclining, and rate of respiration. During certain of the experiments more elaborate studies were

¹ Some results of the first year's work of the New York State Commission on Ventilation—a paper read before Joint Session Laboratory and Sanitary Engineering Sections, American Public Health Association, Jacksonville, Fla., Dec. 3, 1914. Reprinted from American Journal of Public Health, vol. 5, No. 2. Boston, 1915. 34 pp. Illustrated. 9 charts.

made of the return of the pulse to its normal rate after physical work, of the respiratory quotient, of the carbohydrate and protein metabolism, of the size of the dead space of the respiratory passages, of the amount of heat produced by the body, of the constitution of the air in the alveoli of the lungs and hence of the acidosis of the blood, of the duration of digestion, of the dissociation of the oxyhemoglobin of the blood, and of the specific gravity and the freezing point of the urine.

The amount of physical work performed under various conditions was measured by the use of a Krogh bicycle ergometer and by a simple apparatus in which dumb-bells were successively raised and lowered through a known height, the completion of each excursion being recorded by a lever attached to the counter.

The quantity and quality of intellectual product per unit of time under different air conditions was exhaustively studied by a long series of psychological tests, including naming of colors, and opposites, cancellation, addition, mental multiplication, typewriting and grading specimens of handwriting, poetry, and English composition.

Finally in two series of experiments the effect of air conditions upon appetite was studied by serving standard lunches to the subjects in the observation room and determining the number of calories consumed.

In the pamphlet outlining the results of the first year's work of the commission numerous charts are presented and each experiment is described in detail. In general, all the experiments tended to show that as compared with chemical purity of the air temperature is by far the more important item in determining comfort in an occupied room. It was found that even slight differences in temperature produce characteristic physiological responses in the body, and affect the output of physical work and likewise the inclination to do mental work. In only one respect did the chemical quality of the air breathed seem to show any characteristic effect on the body mechanism, this effect appearing in the slightly diminished appetite for food in a stale, unventilated atmosphere.

Based on these experiments the commission reached the following conclusions:

1. A very high room temperature, such as 86° F., with 80 per cent relative humidity, produces slight but distinct elevation of body temperature, an increase in reclining heart rate, an increase in the excess of standing over reclining heart rate, a very slight lowering of systolic blood pressure, and a marked fall in the Crampton value.

2. A moderately high room temperature, 75°, with 50 per cent relative humidity, has all the effects noted above, although, of course, in less degree than the extreme temperature condition.

3. Even the extreme room temperature of 86°, with 80 per cent relative humidity, shows no effect upon rate of respiration, dead space in the lungs, acidosis of the blood, dissociation of oxyhemoglobin, respiratory quotient, rate of heat production, rate of digestion, carbohydrate or protein metabolism, concentration of the urine, and skin sensitivity.

4. The power to do either mental or physical work, measured by the quantity and quality of the product by subjects doing their utmost, is not all diminished by a room temperature of 86°, with 80 per cent relative humidity.

5. On the other hand, the inclination to do physical work and the inclination to do mental work are diminished by sufficiently high room temperatures. So far as physical work is concerned, our tests show a decrease in actual work performed, when the subject had a choice between working or not working, of 15 per cent under the 75° condition and of 37 per cent under the 86° condition, as compared in each case with 68°.

6. Stagnant air at the same temperature as fresh air, even when it contains 20 or more parts of carbon dioxide and all the organic and other substances in the breathed air of occupied rooms, has, so far, shown no effect on any of the physiological responses listed above under 1 and 3, nor on the power or inclination to do physical or mental work, nor on the sensations of comfort of the subjects breathing it.

7. On the other hand, the appetite for food of subjects exposed to such stagnant air may be slightly reduced.

8. These experiments seem to indicate that overheated rooms are not only uncomfortable, but produce well-marked effects upon the heat regulating and circulatory systems of the body and materially reduce the inclination of occupants to do physical work. The most important effects of "bad air" are due to its high temperature, and the effects of even a slightly elevated room temperature, such as 75°, are sufficiently clear and important to warrant careful precautions against overheating.

9. The chemical changes in the breathed air of occupied rooms are of comparatively minor importance, although the substances present in such air may exert a slight decrease in the appetite for food.

During the year 1915,¹ besides repeating certain of the studies on temperature and stale air, the commission gave attention to (1) the relation of heat and cold to respiratory affections, (2) the influence of humidity on comfort and mental work, (3) methods for determining the dust content of the air, (4) the comparative effects of different types of natural and mechanical ventilation on comfort, mental efficiency, and physical condition, and (5) the course taken by air currents in a fan-ventilated room. It was thought desirable to determine, if stale air is bad, what particular element of staleness is bad, whether it is the odor, the increase of carbon dioxide, or of organic poisons which dull the appetite. As to the relation of heat and cold to respiratory affections, the commission experimented with nearly 150 subjects exposed to varied conditions of heat, cold, and humidity. It was found that heat causes a swelling of the inferior turbinates of the nose, tending to diminish the size of the breathing space, and increased secretion and reddening of the membranes, while the action of cold as a rule is just the opposite. These experiments also led the commission to conclude that chilling and overheating tend to diminish the body's resistance to infection.

¹ An outline of the activities of the New York State Commission on Ventilation, for the year 1915, presented at the annual meeting of the American Society of Heating and Ventilating Engineers, New York City, Jan. 20, 1916, by George T. Palmer, Chief of Investigating Staff, New York State Commission on Ventilation. 18 pp. Illustrated. 11 charts.

In its study of the influence of humidity on comfort and mental work, the experiments, based on a dry-schoolroom condition of 75° and 20 per cent relative humidity, seemed to indicate that intermediate humidities around 35 per cent are at least more comfortable than either the extreme dryness or the 50 per cent humidity which feels quite moist. The effect of dryness in increasing the steadiness of the hand, the eye, or the arm or in causing confusion of mind or distraction, if indicated at all, appeared to be very slight. As measured by the saturation deficit the dryness of 20 per cent humidity at 75° is greater than at 68°, and it is therefore more than probable that dryness at 68° would be even less easily detected if at all.

In considering the dust problem as a ventilation factor, the commission found itself handicapped by lack of satisfactory devices for collecting and analyzing dust, and the results of experiments of this character are reserved for a future report.

The commission made a study of the comparative efficiency of natural ventilation and the more complex mechanical ventilation, desiring to find out whether there is an appreciable advantage to comfort in admitting air to a schoolroom directly from open windows, and, if such an advantage exists, to determine whether it is of such moment as to influence the physical and mental development of pupils.

Much of the work of the commission, it is explained, is being repeated for verification, the result of which may influence the interpretation of the preceding efforts, and many of the experiments have not yet been concluded.

RECENT REPORTS RELATING TO WORKMEN'S COMPENSATION AND INDUSTRIAL ACCIDENTS.

CALIFORNIA.¹

The report of the industrial accident commission of California presents the activities of the five departments—compensation, permanent disability rating, medical, insurance, and safety—and gives statistics for the year ending December 31, 1914. On June 30, 1915, 6,858 employers had filed with the commission written acceptances of the compensation provisions of the law; the number of employees given protection is not stated. Of the 1,269 cases filed with the commission for adjudication during the fiscal year, 939 were decided, of which 598 involved awards as follows:

¹ California. Report of the industrial accident commission, July 1, 1914, to June 30, 1915. San Francisco [1915]. 140 pp. Illustrated.

VALUE OF AWARDS IN DECIDED CASES, JULY 1, 1914, TO JUNE 30, 1915.

Nature of injury.	Number.	Amount of award.
Fatal.....	133	\$310,898.48
Permanent disabilities.....	121	141,945.51
Temporary disabilities.....	344	31,041.00
Total.....	598	482,884.99

The insurance department reports that "it has now been demonstrated beyond a doubt that it is possible for the State permanently and economically to conduct an insurance enterprise," and adds that at the close of the first year the "fund" had written \$547,161.24 in net compensation insurance premiums, or approximately \$144,000 in excess of the writings of its nearest competitor. On June 30, 1915, a refund to policyholders, amounting to 15 per cent of the earned premiums, was declared. From January 1, 1914, to June 30, 1915, 5,861 cases of accidental injuries were reported to the "fund;" 5,392 of these cases resulted in temporary total disability, 83 resulted in permanent partial disability, and 37 resulted in death. Of the total cases reported, 349 were rejected as creating no liability on the part of the State compensation insurance fund. The financial statement of the fund as of June 30, 1915, covering 18 months, is as follows:

State compensation insurance fund.

RECEIPTS.

Appropriation	\$100,000.00
Premiums written, less premiums returned	928,152.09
Interest received, due and accrued.....	24,840.26
Total.....	\$1,052,992.35

DISBURSEMENTS.

Expenses and salaries (other than claim department)	\$76,651.62
Expenses and salaries (claim department)	31,216.34
Compensation and statutory medical payment	162,488.73
Statutory reserve for outstanding liabilities	385,796.84
Unearned premiums	145,041.40
Total.....	801,194.93
Total surplus	\$251,797.42
Less refund allowed policyholders.....	65,866.85
Net surplus.....	185,930.57
Appropriation	100,000.00
Net accumulated surplus (unapportioned)	85,930.57

The above statement, it is explained, is based on the statutory reserve of \$385,796.84 to cover outstanding liabilities. If the indicated amount of such liabilities (\$171,920.77, including liberal estimates for all undetermined cases) were used the surplus would be as follows:

Total surplus.....	¹ \$465, 673. 49
Less refund allowed policyholders.....	65, 866. 85
Net surplus.....	399, 806. 64

The safety department reports 746 inspections affecting 76,843 employees. In these visits emphasis was laid upon the importance of employers purchasing machinery properly protected. There is one safety museum in San Francisco which received a large number of additional exhibits during the year. A branch safety museum is located at Los Angeles. The value of these museums is emphasized.

The reporting of industrial accidents in California is obligatory, even farmers and employers of domestic and casual labor, who are exempted from liability for compensation, being required to submit reports. Failure to report or give intelligence of industrial accidents is, upon conviction, punishable by a fine. It is stated that this power to punish has never yet been invoked by the commission. In those industries where accident compensation is not paid, it is fair to assume that the total accidents reported will be considerably below the number which actually occurred, for this has been the experience in all countries.

During the year 1914, 62,211² accidents were reported to the commission. Of this number 678 were fatal, 1,292 were permanent, and 60,241 were temporary. Employers and insurance companies paid \$1,861,809.35 to relieve and compensate the injuries resulting from the year's accidents. The following statement indicates the total and average payments for compensation and medical and burial benefits for each class of injury:

AMOUNT PAID IN COMPENSATION, AND MEDICAL AND BURIAL BENEFITS, FOR EACH SPECIFIED CLASS OF INJURY, SHOWING AVERAGE PER CASE, 1914.

Nature of disability.	Num- ber.	Per cent.	Compensation.		Medical aid.		Total benefits.	
			Paid.	Aver- age per case.	Paid.	Aver- age per case.	Paid.	Aver- age per case.
Fatal.....	678	1.1	\$243, 366. 20	\$358. 95	\$34, 751. 29	\$51. 26	\$278, 117. 49	\$41. 02
Permanent.....	1, 292	2.1	283, 521. 59	211. 70	79, 721. 03	61. 70	363, 242. 62	281. 15
Temporary.....	60, 241	96.8	604, 743. 00	10. 04	615, 706. 24	10. 22	1, 220, 449. 24	20. 25
Total.....	62, 211	100.0	1, 131, 630. 79	18. 19	730, 178. 56	11. 74	1, 861, 809. 35	29. 92

¹ This is obtained by substituting \$171,920.77 for \$385,796.84 in the statement of disbursements.

² In all, 62,666 accidents were reported, but 455 are not included in the report since it was impossible to determine whether they were bona fide accidents.

³ Includes burial expenses, the amount of which is not stated.

⁴ Of this number, 12,737 were compensable, that is, caused a time lost of 15 days or more, making the average compensation paid per case \$47.48, the average medical aid \$48.34, and the total average paid \$95.82.

Of the 678 fatal accidents, 226, or 33.33 per cent, occurred in transportation; 121, or 17.85 per cent, in manufacturing; and 115, or 16.96 per cent, in construction work. Nearly 22 per cent were caused by collisions, 20.94 per cent by persons falling, and 20.06 per cent by dangerous substances. The average age of those killed was 39 years, 25.81 per cent falling in the 30 to 39 year group and 67.55 per cent being between the ages of 20 and 50. Approximately 52 per cent were receiving between \$10 and \$19 per week, and 83.19 per cent were receiving \$30 or less a week. Nearly 40 per cent were married men, and 59.14 per cent were native Americans.

In a study of the 1,292 permanently injured, it is shown that during 1914 compensation amounting to \$283,521.59, or about \$219 each, was paid to those so disabled. The average per case in 1913 was \$126.84. More than one-third (37.3 per cent) of these injuries resulted in amputation of one finger. The largest number of permanent injuries (450, or 34.83 per cent) occurred in manufacturing industries, involving compensation and medical benefits amounting to \$87,088.92. Machinery caused 584, or 45.20 per cent, of the accidents, the total compensation and medical benefits being \$122,091.77. More than 55 per cent were receiving between \$10 and \$19 per week in wages. The married men numbered 636, or 49.22 per cent.

The 60,241 accidents which occasioned only temporary disabilities caused a loss in time of 695,394 days, or an average for all cases where disability lasted through the day of injury of 16.8 days. These accidents represent an estimated total wage loss of about \$2,000,000. Against this figure of wage loss is set the sum of \$604,743, which employers and insurance companies paid in compensation, or a total of \$1,220,449.24, if medical benefits be included. Of the entire number, 18,452 caused no time loss, but required medical attention; 27,664 caused time loss of less than 15 days and were not compensable; and 12,737 caused a time loss of 15 days or more and were compensable. Considering only these last cases, the average compensation paid was \$47.48. The amount paid for medical benefits was \$615,706.24, or an average of \$19.74 per case considered. Most of these accidents, 19,004, or 31.55 per cent, occurred in manufacturing; transportation came second with 15,836, or 26.29 per cent. The chief cause of these temporary accidents were falling objects, 17,126 cases, or 28.43 per cent; and dangerous substances, 12,059 cases, or 20.02 per cent.

Considerable space is devoted to detailed studies of these temporary accidents.

MASSACHUSETTS.

In the REVIEW of September, 1915 (p. 37), was given, by industry classifications, the experience under the Massachusetts workmen's compensation act for the period July 1, 1912, to September 30, 1914,

for each classification for which pay rolls of not less than \$500,000 were reported. The losses actually paid and outstanding (estimated) were given so as to show separately payments for death and specified injuries, weekly indemnity, and medical services. The loss rates per \$100 of pay roll were also given for each classification.

The accompanying table shows the experience under the Massachusetts workmen's compensation act from July 1, 1912, to December 31, 1914, on all policies written by each authorized insurance company in the State. The earned premiums are based upon estimated pay rolls, except for those policies which terminated prior to December 31 of the respective years. On these policies the earned premiums are based upon audited pay rolls. These data were compiled from the schedules and records in the office of the Massachusetts insurance department.

The table shows the net premium written and earned, losses paid and incurred, per cent of loss and expense of premiums earned, and amount spent for inspection and accident prevention work for each year.

It will be noted that the total earned premiums for the two and one-half years amounted to \$11,730,971, while the losses incurred were \$5,466,892. The per cent of loss incurred of total premiums earned for the combined companies was for stock companies 37.06 per cent in 1912, 46.45 per cent in 1913, and 57.96 per cent in 1914, while for mutual companies it was 27.63 per cent in 1912, 35.32 per cent in 1913, and 53.35 per cent in 1914. The increase was due to reductions in premium rates on the one hand and increased cost of the act on the other.

The average acquisition expense—that is, the expense of getting business—together with taxes incurred, was for stock companies 19.05 per cent of the premiums earned in 1912, 18.97 per cent in 1913, and 18.72 per cent in 1914, and for mutual companies, nothing in 1912 and 2.43 per cent in 1913 and in 1914.

Expenses other than taxes and commissions for stock companies amounted to 13.77 per cent of earned premiums in 1912, 17.61 per cent in 1913, and 17.61 per cent in 1914, while for mutual companies they amounted to 13.17 per cent in 1912, 14.59 per cent in 1913, and 14.94 per cent in 1914.

The total expense for the stock companies was 32.81 per cent of earned premiums in 1912, 36.58 per cent in 1913, and 36.33 per cent in 1914, while for the mutuals the percentages were 14.17, 17.02, and 17.37 for the same years.

Expenditures for accident inspection and prevention work for the combined companies were \$31,169 in 1912, \$98,123 in 1913, and \$83,671 in 1914, making a total of \$212,963.

MASSACHUSETTS WORKMEN'S COMPENSATION EXPERIENCE, FROM JULY 1, 1912, TO DEC. 31, 1914.

[Compiled from records of Massachusetts Insurance Department.]

Companies.	Net premiums written.			Losses paid.			Premiums earned.			Losses incurred.			Per cent of losses incurred of premiums earned.		
	1912	1913	1914	1912	1913	1914	1912	1913	1914	1912	1913	1914	1912	1913	1914
Stock.															
1. Aetna.....	\$204,672	\$264,301	\$220,354	\$13,728	\$73,983	\$112,161	\$105,674	\$285,013	\$215,408	\$80,668	\$156,672	\$132,045	47.94	54.97	61.28
2. American Fidelity.....	62,178	26,876	5,558	4,212	16,277	6,277	31,617	59,330	8,558	13,506	28,527	1,506	43.14	47.90	28.76
3. Casualty Co. of America.....	129,674	190,826	143,807	14,383	46,434	74,771	89,221	172,428	158,307	38,432	109,669	65,350	63.09	62.60	41.41
4. Employers' Indemnity.....	1,046,547	1,070,397	828,110	58,034	226,556	376,368	562,359	1,223,302	887,362	142,429	619,501	494,106	26.33	42.12	55.70
5. Employers' Liability.....	63,289	64,403	58,726	2,643	18,983	30,579	31,990	72,653	63,577	9,269	39,929	32,022	28.96	54.96	50.36
6. Fidelity and Casualty.....	44,277	49,879	53,261	2,903	17,216	24,191	17,828	56,862	65,223	15,037	44,140	41,367	94.34	77.63	74.90
7. Fidelity and Deposit.....	84,450	65,332	40,260	3,702	21,713	20,894	50,674	79,350	45,915	19,110	45,701	13,570	37.78	57.00	28.59
8. Frankfort General.....	32,031	35,922	31,232	1,464	10,500	17,434	12,523	30,057	43,711	8,990	29,269	28,245	72.37	97.38	64.67
9. General Accident.....	32,463	52,344	53,206	3,028	14,762	25,147	16,000	51,933	55,394	5,460	25,301	30,526	34.12	45.70	63.10
10. Globe Indemnity.....	138,674	123,496	81,923	1,904	30,319	29,353	70,571	144,669	87,647	15,104	64,823	65,830	21.31	44.81	85.25
11. Hartford Accident and Indemnity.....	102,217	92,357	63,964	5,796	38,894	39,842	55,364	107,296	72,930	40,463	63,219	50,426	73.09	58.90	69.14
12. London Guarantee and Accident.....	42,758	105,343	126,427	1,665	20,137	58,411	22,905	58,773	123,539	11,194	24,955	101,426	50.97	28.27	82.09
13. London and Lancashire.....	67,055	91,929	107,709	1,951	18,182	49,131	23,175	96,677	101,304	9,662	27,208	66,774	41.09	27.53	67.20
14.	55,931	67,107	54,074	2,584	14,614	24,290	21,007	70,336	68,549	15,684	33,124	25,735	48.91	47.10	43.95
15.	2,159	.....	2,507	12	.....	1,435	873	.....	1,076	447	.....	514	51.20	.....	47.79
16.	114,548	98,980	92,780	6,153	35,971	45,001	61,839	116,599	101,571	16,353	47,953	51,843	26.42	41.14	51.04
17.	45,003	35,770	31,900	1,523	10,492	14,472	24,614	43,367	33,208	11,423	20,761	14,066	46.41	47.67	42.44
18.	639,374	688,022	672,041	40,896	211,057	285,980	299,667	786,703	742,636	135,626	320,641	421,621	45.27	40.80	56.76
19. Travelers.....	52,804	48,310	39,773	2,797	16,426	22,014	22,096	58,685	39,509	7,952	27,530	27,904	36.03	46.90	69.66
20. U. S. Casualty.....	50,122	60,079	71,250	3,964	21,165	29,206	15,863	75,672	70,967	5,923	47,143	40,593	27.29	62.50	57.20
21. U. S. Fidelity and Guarantee.....	.....	19,464	41,894	.....	932	11,416	.....	8,823	39,598	.....	12,304	16,555	.....	138.43	41.81
22. Zurich General Accident.....	3,070,185	3,261,240	2,863,637	173,376	967,378	1,526,310	1,545,899	3,642,789	3,056,440	573,844	1,662,216	1,771,120	37.06	46.45	57.96
Mutual.															
27. American Mutual.....	725,260	396,496	335,044	20,563	134,006	182,315	342,320	657,953	344,351	67,829	192,029	315,146	19.77	28.16	91.62
28. Contractors' Mutual.....	65,357	145,948	146,896	6,908	31,673	33,639	35,862	137,425	136,323	16,612	52,457	35,044	46.32	38.90	26.70
29. Massachusetts Employees.....	619,257	706,628	817,599	23,789	132,978	253,048	261,319	671,841	842,137	92,584	273,711	387,165	35.42	40.74	43.90
30. Security Mutual.....	.....	.....	94,256	.....	.....	8,499	.....	.....	56,311	.....	.....	18,434	.....	.....	22.73
Total.....	1,409,873	1,229,062	1,363,766	50,190	318,657	477,501	639,501	1,467,219	1,379,123	176,725	519,197	735,790	27.63	35.33	53.25
Grand total.....	4,480,059	4,500,302	4,287,402	228,566	1,286,025	1,909,811	2,165,400	5,110,008	4,436,569	749,569	2,210,413	2,506,910	34.30	43.23	56.53

Companies.	Per cent of acquisition expense incurred of premiums earned.			Per cent of taxes incurred of premiums earned.			Per cent pro rata expenses other than taxes and commissions were of premiums earned.			Per cent of total expense of premiums earned.			Inspection and accident prevention expense.			Total.
	1912	1913	1914	1912	1913	1914	1912	1913	1914	1912	1913	1914	1912	1913	1914	
Stock.																
1. Aetna.....	17.18	17.90	15.26			1.91	11.45	16.36	18.46	30.03	36.61	35.63	81,761	88,669	87,272	\$17,702
2. American Fidelity.....	17.5	17.5	16.65	2	2	2	6.84	21.46	14.87	26.34	40.98	33.32	1,173	1,173		1,173
3.	17.5	17.5	17.57	2	2	2	14.10	15.3	16.87	33.80	34.80	34.44	1,305	2,419	705	4,429
4.			5			2						7				
5.	17.5	17.5	17.5	2	2	2	6.93	11.97	12.06	26.43	31.47	31.63	1,413	6,833	8,718	16,964
6.	17.5	16.02	16.6	2	2	1.96	21.28	24.36	25.77	40.78	42.5	44.33	963	500	986	2,451
7.	17.5	17.5	17.5	2	2	2	21.21	28.1	21.3	40.71	47.6	40.8	350	550	273	1,173
8.	17.5	17.2	17.89	2	2	2	17.95	22.2	28.17	37.45	41.4	48.06	2,585	2,319	2,182	7,065
9.	17.5	17.5	24.11	2	2	2	12.55	17.44	37.11	32.05	36.94	63.22	40	453	285	879
10.	17.5	17.7	17.6	2	2	2.1	81.02	26	21.5	50.52	44.8	41.1	1,000	1,361	1,001	3,452
11.			21.7			1.32			35.28			58.3			93	93
12.	17.5	17.5	17.62	2	2	2.06	11.18	14.97	14.84	30.68	34.47	34.52	1,412	1,957	1,311	4,680
13.		17.4	12.9			2.18		57.33	29.85		76.7	44.93				
14.	17.5	17.2	17.35	2	2	2	18.65	25.1	12.64	38.15	41.3	31.99	409	3,768	4,342	8,517
15.	9.25	9.61	13.98				17.6	15.51	21.91	26.85	25.12	35.89		1,053	1,580	2,634
16.			17.5			2			28.92			68.42				
17.	14.4	14.63	16.66				30.58	18.4	18.54	44.98	33.03	35.2		269	431	799
18.	17.5	17.5	16.4	2	2	2	10.17	17.9	16.47	29.67	37.5	34.87		606	863	1,948
19.			17.5			2			23.5			43			75	75
20.	17.42						17.21			36.63						
21.	17.5	16.01	16.53	2	2		19.99	32.12	18.28	39.49	50.13	36.79	909	6,164	4,296	11,369
22.	10.89	15.81	22.19	2	2	2	15.83	14.75	22.62	28.72	32.56	46.81	895	483	474	1,831
23.	17.04	17.3	16.25	2	2	2	21.26	21.3	19.11	40.30	40.7	37.36	11,901	27,061	16,422	55,084
24.	16.98	17.4	17.01	2	2	1.7	20.71	26.9	27.24	39.69	46.3	46.01	2,003	2,768	2,886	7,467
25.	16.84	17	15.66	2	2	2	22.94	17.3	15.52	41.76	36.3	33.17				
26.		17.5	17.5			2		44.46	24.54		63.96	44.04		585	1,491	2,076
Total.....	17.11	18.97	18.72	1.94	(¹)	(²)	13.77	17.61	17.61	32.81	36.58	36.33	27,124	69,089	55,676	151,899
Mutual.																
27. American Mutual.....				1	1	1.24	9.48	8.87	15.67	10.48	9.87	16.01	1,123	3,409	3,995	8,527
28. Contractors' Mutual.....		2.3	4.27	1	1.4	1	23.36	17.3	20.86	24.36	21.5	26.13	615	2,753	2,532	5,919
29. Massachusetts Employees.....		1.55	1.33	1	1.4	1.12	16.61	19.55	14.17	17.61	22.5	16.62	2,307	22,873	20,848	46,028
30. Security Mutual.....						2			7.55			9.55			600	600
Total.....	0	2.43	2.43	1	(¹)	(²)	13.17	14.59	14.94	14.17	17.02	17.37	4,045	29,024	27,995	61,014
Grand total.....	12.10	14.42	13.42	1.67	(¹)	(²)	13.59	16.74	17.28	27.36	31.16	30.7	31,169	98,123	83,671	212,963

¹ The earned premiums are based upon estimated pay roll except for those policies which terminated prior to Dec. 31 of the respective years. On these policies earned premiums are based upon audited pay rolls.

² Includes taxes.

³ Included in acquisition expense.

NEW YORK.¹

Since 1901 the New York Department of Labor has published annual reports on industrial accidents occurring within the State. In 1914 employers in factories, mines, and quarries and building and engineering work were required to report to the department all accidents which caused any interruption of work or required any treatment, medical or otherwise. The reports for this year are believed by the department to be more complete than the statistics for previous years, although they are by no means complete.

Of the various causes of nonfatal accidents by far the most significant was power machinery. To this factor were chargeable 26.7 per cent out of a total of 88,314 nonfatal accidents reported during the year ending September 30, 1914. Of this proportion 18.7 per cent were chargeable to machines at which the person injured was working, 5.4 per cent to conveying and hoisting machinery, 2.6 per cent to transmission of power. Next to power machinery as a factor in causing nonfatal accidents stands weights and falling objects, which accounted for 24.4 per cent; hand tools accounted for 10.8 per cent; fall of person, 9.6 per cent; heat and electricity, 6.9 per cent; and vehicles and animals, 2.5 per cent; while miscellaneous causes—including knocking against objects, stepping upon or striking against nails, handling sharp objects, flying objects, whose source is unknown, poisoning gases, etc.—accounted for 19.1 per cent.

Distribution of the causes of accidents within industries showed very similar results as to the importance of power machinery in producing accidents. Thus, in factories, this item accounted for 31.7 per cent of the 64,250 factory accidents reported. In mines and quarries the heaviest factor in producing accidents was that of weights and falling objects, which accounted for 48 per cent of the total of 1,277 accidents. This was also the most important factor in causing accidents in building and engineering operations, accounting for 36 per cent out of a total of 22,787 nonfatal accidents. In each of the three groups of industries the cause to which is attributed the smallest proportion of accidents is vehicles and animals.

The highest accident rates due to power machinery are found in the following factory industries:

	Per cent.
Printing and paper goods.....	54.9
Wood manufacturing.....	54.5
Furs, leather, and rubber goods.....	54.0
Textiles.....	49.3
Clothing, millinery, etc.....	44.2
Paper.....	37.0

¹ New York Department of Labor, Special Bulletin, issued under the direction of the Industrial Commission, No. 75: Statistics of industrial accidents, 1914. Prepared by the Bureau of Statistics and Information. 77 pp.

On the other hand the following show low rates due to this cause: Stone, clay, and glass products; chemicals, oils, paints, etc.; food, liquor, and tobacco; and water, light, and power.

These facts are, of course, in keeping with the character of the industry and are determined very largely by the proportion of power machinery in use.

High proportions of accidents due to fall of person are shown for chemicals, oils, paints, etc.; paper, clothing, millinery, laundry, etc.; food, liquor, and tobacco; and water, light, and power. This is explained as due to the fact that a number of employees work on wet and slippery floors in many of these industries.

Compared with factories, the report declares, the industries in the building and engineering group show a low proportion of accidents due to power machinery.

To show in greater detail the percentage distribution of the non-fatal accidents classified according to their cause, the following table has been taken from the report:

NONFATAL ACCIDENTS DURING YEAR ENDING SEPT. 30, 1914, REPORTED PRIOR TO NOV. 1, 1914, BY INDUSTRIES AND CAUSES.

Industry.	Total reported non-fatal accidents.	POWER MACHINERY.				Heat and electricity.	Fall of person.	Weights and falling objects.	Vehicles and animals.	Hand tools.	Miscellaneous.	Total.
		Power transmission machinery.	Conveying and hoisting machinery.	Working machines.	Total.							
Factories.												
Stone, clay, and glass products.....	2,077	5.7	4.3	8.6	20.6	12.4	7.9	22.8	4.6	9.9	20.8	100.0
Metals, machines, and conveyances.....	38,786	2.2	3.6	23.7	29.4	7.7	6.1	21.2	1.6	11.6	22.3	100.0
Wood manufactures.....	2,743	4.4	2.7	47.3	54.5	2.5	7.8	15.0	2.7	5.9	11.7	100.0
Furs, leather, and rubber goods.....	2,148	4.6	2.2	47.2	54.0	3.6	5.8	9.1	1.3	12.3	13.9	100.0
Chemicals, oils, paints, etc.....	2,576	2.5	4.5	10.1	17.1	18.5	12.3	20.5	2.4	7.5	21.7	100.0
Paper.....	2,010	5.8	4.1	27.1	37.0	5.6	11.7	23.6	3.1	8.6	10.4	100.0
Printing and paper goods.....	2,364	4.6	2.3	48.0	54.9	2.6	8.2	15.6	1.9	4.1	12.7	100.0
Textiles.....	3,115	10.5	2.0	36.8	49.3	3.9	10.3	11.7	1.9	8.7	14.2	100.0
Clothing, millinery, etc.....	1,048	4.1	2.8	37.3	44.2	4.3	15.9	8.3	1.0	10.5	15.8	100.0
Food, liquors, and tobacco.....	4,617	4.6	6.6	12.1	23.3	6.9	13.9	21.1	5.5	6.8	22.5	100.0
Water, light, and power.....	2,738	2.7	4.5	4.8	12.0	17.0	11.6	21.3	4.0	12.9	21.2	100.0
Miscellaneous.....	48	.....	33.3	.....	33.3	4.2	20.8	29.2	.....	2.1	10.4	100.0
Total.....	64,250	3.3	3.8	24.7	31.7	7.8	7.9	19.8	2.2	10.3	20.2	100.0
Mines and Quarries.												
Mines.....	565	.7	13.4	5.0	19.1	4.1	7.6	52.6	1.8	9.5	5.3	100.0
Quarries.....	712	1.3	12.4	8.2	16.8	5.7	0.0	44.4	2.8	14.5	5.7	100.0
Total.....	1,277	1.0	12.8	4.0	17.9	5.0	6.9	46.0	2.4	12.3	5.6	100.0

NONFATAL ACCIDENTS DURING YEAR ENDING SEPT. 30, 1914, REPORTED PRIOR TO NOV. 1, 1914, BY INDUSTRIES AND CAUSES—Concluded.

Industry.	Total re-ported non-fatal acci-dents.	Percentage of nonfatal accidents due to—										To-tal.
		Machinery.				Heat and elec-tricity.	Fall of per-son.	Weights and falling objects.	Vehi-cles and ani-mals.	Hand tools.	Mis-cel-lan-eous.	
		Pow-er trans-mis-sion ma-chin-ery.	Con-vey-ing and hoist-ing ma-chin-ery.	Work-ing ma-chines.	To-tal.							
Building and Engineering.												
Excavating.....	10,984	0.7	11.0	3.2	14.9	4.2	11.1	39.2	4.5	11.5	14.6	100.0
<i>Thereof shafts and tun-nels</i>	7,401	.5	10.3	2.9	13.7	3.8	10.2	41.9	4.5	10.3	15.6	100.0
Erecting and structural work.....	5,481	.4	6.9	2.3	9.6	2.2	19.3	33.7	2.1	9.1	24.0	100.0
Finishing and furnishing.....	2,649	.3	5.1	2.0	7.4	11.1	24.5	26.8	1.4	10.2	18.6	100.0
Wrecking and moving....	71	.....	2.8	1.4	4.2	2.8	16.9	39.4	.....	11.3	25.4	100.0
Other or miscellaneous...	3,602	.4	11.7	3.9	16.1	4.7	9.6	36.7	4.3	18.8	9.9	100.0
Total.....	22,787	.6	9.4	2.9	12.9	4.6	14.4	30.0	3.5	11.9	16.7	100.0
Grand total.....	88,314	2.6	5.4	18.7	26.7	6.9	9.6	24.4	2.5	10.8	19.1	100.0

That section of the report under review which relates to the causes of fatal industrial accidents is based on the number of accidents (2,819) reported to the department during the years 1911 to 1914. Accidents occurring in connection with three catastrophies which caused 204 deaths are not included.

The greatest proportion of fatal accidents in factories, 42.3 per cent, was caused by mechanical power. Mechanical power is, therefore, the most significant factor in producing fatal accidents, as well as nonfatal ones. Heat and electricity caused 23.9 per cent and fall of person 18.4 per cent of all fatal accidents in factories, 1911 to 1914. The classified number and distribution of the causes of 2,819 fatal industrial accidents, 1911 to 1914, is as follows:

NUMBER AND COMPARATIVE PERCENTAGES OF FATAL ACCIDENTS IN FACTORIES, MINES AND QUARRIES, AND BUILDING AND ENGINEERING, 1911 TO 1914, BY MAIN CAUSES.

Cause.	Number.			Per cent.		
	Factories.	Mines and quarries.	Building and engi-neering.	Factories.	Mines and quarries.	Building and engi-neering.
Mechanical power.....	457	26	518	42.3	26.8	31.6
Heat and electricity.....	259	24	239	23.9	24.7	14.6
Fall of person.....	199	8	545	18.4	8.2	33.2
Weights and falling objects.....	81	35	246	7.5	36.1	15.0
Miscellaneous.....	85	4	93	7.9	4.2	5.6
Total.....	1,081	97	1,641	100.0	100.0	100.0

“Assuming the technique of industry to remain substantially the same as it has been during the years from 1911 to 1914, inclusive, the completeness of the reports recorded in the above table justifies the

following tentative conclusions: First, that mechanical power will continue to cause most fatalities in factories, followed in order by heat and electricity, fall of person, weights and falling objects, and miscellaneous causes. With increased knowledge of the cause of accidents some of the fatalities classified now in the last-named group will undoubtedly be shifted to the other groups. Second, that weights and falling objects will continue to be the leading cause of fatalities in mines and quarries, followed in order by mechanical power, heat and electricity, fall of person, and miscellaneous causes. And, third, that fall of person will continue to cause most fatal accidents in building and engineering, followed in order by mechanical power, heat and electricity, weights and falling objects, and miscellaneous causes. Mechanical power may lead fall of person in the number of fatalities, and it is almost certain that the completion of the subways in New York City will reduce the proportion of deaths in the building and engineering group due to weights and falling objects."

The department, in addition to its inquiries regarding the causes of industrial accidents, made a special investigation of 1,571 machinery accidents in factories during the years 1913 and 1914 with a view to ascertaining the relation of the use of guards to the occurrence of accidents. The character of the selection of the accidents investigated does not permit of any conclusions as to the frequency of occurrence of accidents in connection with the use of guards on machinery but does reflect some information concerning the attitude of employers and employees regarding the question of the use of guards, and also throws some light on the extent of our knowledge of practical and effective machine guards.

The results of the investigations, as reported by the investigators who made them, are recorded as follows:

PERCENTAGE DISTRIBUTION OF INVESTIGATED MACHINE ACCIDENTS IN FACTORIES IN RELATION TO GUARDS.

Kind of machinery.	Guard was used.	Guard was provided but not used.	Guard was not practicable.	Guard was practicable but not provided at time of accident.		Total.	Unknown. ¹
				Not provided before investigation.	Provided before investigation.		
Saws.....	48.3	16.4	7.7	15.9	7.7	23.6	4.0
Gearing.....	26.0	10.5	5.6	28.0	26.3	54.3	3.6
Stamping machines.....	21.7	6.6	31.9	18.1	16.3	34.4	5.4
Elevators.....	34.9	.....	1.8	35.8	22.9	58.7	4.6
Planers and jointers.....	44.8	27.6	3.8	8.6	13.3	21.9	1.9
Paper cutting, stitching, and staying machines.....	38.5	16.3	19.2	13.5	9.6	23.1	2.9
Miscellaneous.....	30.2	5.0	31.1	12.3	18.6	30.9	2.8
All machines.....	34.8	10.7	17.0	17.7	16.3	34.0	3.5

¹ Cause of accident no longer existed at time of investigation because machine had been removed or factory was closed, etc.

As no statistics are available to show the number of guarded and of unguarded machines in the State, no conclusion, the report points out, can be drawn concerning the accident hazard of unguarded machines as compared with the accident hazard of the same machines guarded. Furthermore, as the accidents investigated were carefully selected, including only those resulting in death, dismemberment, or long-time disablement, or cases where violation of law might be suspected and were not random samples, the statistics in this table are not therefore representative of all accidents occurring at such machines. Nevertheless, with these limitations in view, the report deems that the table unquestionably shows four significant facts:

(1) In over one-third of all accidents investigated (34 per cent) and in over one-half of those occurring at two kinds of machinery—gearing (54.3 per cent) and elevators (58.7 per cent)—no guards were provided at the time of the accident; (2) in over one-tenth of all accidents investigated and in over one-fourth of those occurring at planers and jointers guards were provided, but were not in use at the time of the accident; (3) over one-third of all accidents investigated and nearly one-half of those occurring at saws, planers, and jointers happened in spite of the fact that machines were guarded as fully as possible at the time of the accident; (4) in over one-sixth of all accidents investigated and in nearly one-third of those occurring at stamping machines and miscellaneous machines guards were not practicable.

“The two outstanding conclusions to be drawn from the above facts are these: First, that neither employers nor employees recognize the necessity of utilizing to the fullest extent the known means of guarding machinery to prevent accidents; and, second, that our knowledge of practicable and effective machine guards is still elementary.”

EMPLOYMENT IN MINES AND QUARRIES IN OHIO, 1914.

A report has recently been issued by the department of investigation of statistics of the industrial commission of Ohio,¹ which presents statistics of employment and, incidentally, of production for the mines and quarries of Ohio during the calendar year 1914. It is very similar in its purpose and scope to a report by the same department on conditions of employment in the general manufacturing industries of the State. This latter report, it is noted, was summarized in the preceding, or April, number of the REVIEW.

The report under review relates to 54,896 employees in mines and quarries, indicating for these the number of days worked, the average wages, total annual wage and salary payments, and accident hazard.

¹ The Industrial Commission of Ohio. Department of Investigation and Statistics, Report No. 19: Statistics of Mines and Quarries in Ohio, 1914. Columbus, Ohio, 1916. 104 pp.

The report is presented in five sections, the first of which deals with coal mines, while the other five deal with fire-clay mines, gypsum mines, iron mines, limestone quarries, and sandstone quarries.

Employment conditions in the coal mines of Ohio in 1914 were marked by a serious strike, which began on April 1, 1914, and terminated generally on July 29 of that year, although in eastern Ohio no settlement was secured until May 22, 1915, and it was not until a yet later date that agreements were reached in some other districts. This strike and the industrial conditions in the State, the report declares, resulted in a very much reduced output of coal—48.4 per cent less than in 1914, 45.6 per cent less than in 1910, and 27.5 per cent less than in 1905.

Progress in mining technique throughout the State, which produced during 1914 approximately 19,000,000 tons of coal, is shown by the fact that the per cent of machine-mined coal, which in 1900 formed 48.7 per cent of the total mined, was 85.4 per cent in 1914.

Regarding conditions of work it is noted that the month of maximum employment was March, while the month of minimum employment was June. This information comes from 795 firms, reporting in these months, respectively, 43,190 and 5,331 men. This is not a normal fluctuation (87.7 per cent), but was caused by the general strike in the coal field.

The annual tonnage per employee was reduced in proportion to the reduced number of days worked, but on the other hand the reduction per employee per day shows very little variation from preceding years. The average number of tons mined per day per pick miner was 3.3 tons, while the production per day for machine runners and helpers was 45.2 tons; the daily output per loader (including driller and shooters) was 6.1 tons per day for the year.

The average rate of wages per day in 1914 for the various occupations is contained in the following statement:

AVERAGE WAGES OF EMPLOYEES IN COAL MINES, BY OCCUPATION, FOR THE YEAR ENDING DEC. 31, 1914.

Occupation.	Number of employees.	Average rate of wages per day.	Occupation.	Number of employees.	Average rate of wages per day.
Pick miners.....	4,985	\$2.59	Motormen.....	622	\$2.83
Machine runners and helpers..	3,489	4.30	Motormen's helpers.....	432	2.79
Loaders (including drillers and shooters).....	25,677	2.97	Other inside day labor.....	1,281	2.68
Tracklayers.....	643	2.81	Engineers.....	454	2.83
Tracklayer's helpers.....	329	2.63	Firemen.....	292	2.18
Trappers.....	924	1.31	Dynamo men.....	19	2.98
Bottom cagers.....	241	2.71	First blacksmith.....	286	3.02
Drivers.....	2,378	2.74	Second blacksmith.....	114	2.83
Trip rope riders.....	88	2.77	Blacksmiths' helpers.....	41	2.71
Water haulers.....	125	2.77	Carpenters.....	206	2.75
Machine haulers.....	49	2.86	Dumpers.....	461	2.42
Timbermen.....	600	2.77	Trimmers.....	877	2.43
Pumpers.....	276	2.63	Slack haulers.....	34	2.11
Pipemen.....	8	2.73	Greasers.....	151	1.96
Electricians.....	208	3.22	Couplers.....	191	2.02
Electricians' helpers.....	148	2.77	Other outside help.....	1,060	2.37
			Office employees.....	278	2.40

The minimum average rate of wages per day appears to be \$1.31, applicable to 924 trappers, while the maximum is \$4.30, applicable to 3,489 machine runners and helpers.

The total wage and salary payments for 936 mines included in the report for the year 1914 was \$16,095,749, of which amount 98.3 per cent went to wage earners exclusive of office employees, while 1.7 per cent went to pay the office clerical force.

The accident data of the report under review are based on the returns from the inspector of mines and from the workmen's compensation division of the commission. Owing to the lack of data, it has not been possible to ascertain the number of accidents on the basis of the number of full-time workers, and recourse has been had in ascertaining the relative increase or decrease in accidents to the number of men employed per accident and the number of tons of coal mined per accident. In Ohio these comparisons are limited to fatal accidents as reported to the division of mines and to accidents resulting in disability of more than three weeks, as tabulated by the department of investigation and statistics from claims allowed by the industrial commission.

On the basis of the number of persons employed per accident, it appears that in 1913 one man was killed to every 293 employed (3.41 per 1,000), while in 1914 one man was killed to every 810 men employed (1.23 per 1,000). On the tonnage basis, during 1914 one fatal accident occurred to every 323,042 tons of coal mined, while in 1913 one such accident occurred to every 219,912 tons of coal mined. The 10-year average preceding 1914 was one fatal accident to every 228,655 tons mined, the figure for 1914 therefore representing perhaps some real gain.

There were 7 fatal accidents not included in the above presentation because in 4 the award was not determined during the year, 2 were in mines not under the act, and 1 case is still pending.

Judged from awards under the workmen's compensation act, "coal-mine accidents in a year when the output of the State was practically the half of the normal output cost in actual money outlay a quarter of a million dollars." Computed on a time basis, "the time lost as a result of coal-mine accidents for which awards were made during 1914 was equal to the entire time of 1,682 men for one year."

During the year the predominant cause of fatal accidents in the mines was falls of stone, slate, and coal, which accounted for 35 deaths out of 51 tabulated from awards of the commission. Only one accident was reported as resulting in permanent total disability and was due to a fall of slate. Sixty-two awards for accidents resulting in permanent partial disability were made during the year.

For temporary disabilities of more than seven days awards were made in 1,470 instances.

The following comparative data are given for the purpose of contrasting the duration of disability in injuries received in coal mines with those received in all industries, including coal mines:

DURATION OF DISABILITY IN INJURIES RECEIVED IN COAL MINES, AND IN ALL INDUSTRIES.

Classified duration.	Coal mining.		All industries.	
	Number.	Per cent.	Number.	Per cent.
Under 1 week.....	482	24.7	38,666	54.2
1 and under 2 weeks.....	318	16.3	11,267	15.8
2 and under 3 weeks.....	308	15.8	7,699	10.8
3 and under 4 weeks.....	244	12.5	4,406	6.2
4 and under 13 weeks.....	510	26.1	8,183	11.4
13 weeks and over.....	90	4.6	1,122	1.6
Not reported.....			44	(1)
Total.....	1,952	100.0	71,387	100.0

¹ Less than one-tenth of 1 per cent.

From this statement it appears that 59 per cent of the accidents resulted in disabilities of two weeks or more, while 30.7 per cent resulted in disabilities of five weeks or more. It appears, therefore, that, considering only temporary disabilities, the severity of accidents in coal mines is considerably greater than that in other industries in general, inasmuch as only 30 per cent of the accidents distributed through many industries caused disabilities of two weeks or more and only 13 per cent caused disabilities of five weeks or more.

The total compensation paid for accidents occurring in Ohio coal mines during 1914 was \$242,824.31.

Statistical tables showing the number of employees in the various occupations, number of working days, tons of coal mined per day per employee, by occupations, and average daily wages, causes of accidents resulting in injuries, duration of disability, and character of the injury received are presented.

For coal and other mines and for quarries the annual production, number of employees by months, days of operation, classified wages, and hours of labor per week are reported.

HEALTH OF MUNITION WORKERS, GREAT BRITAIN.¹

The health of munition workers committee, which was appointed in September, 1915, "to consider and advise on questions of industrial fatigue, hours of labor, and other matters affecting the physical health and physical efficiency of workers in munition factories and workshops," in November and December, 1915, submitted three interim reports on special phases of their work, including Sunday labor, welfare supervision, and industrial canteens. Evidence was taken in London and other important centers from employers, representatives of workers, and other interested persons, and a large number of factories and workshops situated in different parts of the country was visited by one or more members of the committee.

It was found that the problem of Sunday labor, as respects munition factories, is primarily a question of the extent to which workers actually require weekly or periodic rest if they are to maintain their health and energy over long periods, since intervals of rest are needed to overcome mental as well as physical fatigue. Account was taken not only of the hours of labor, the environment of the work and the physical strain involved, but also the mental fatigue or boredom resulting from continuous attention to work. The great majority of employers seem to object to Sunday labor, declaring that it interferes with proper supervision and imposes a severe strain on the foremen; that it means high wages often coupled with increased cost of running the works; that it does not always result in a satisfactory individual output; that it is frequently accompanied by bad timekeeping on other days of the week; and, finally, that there is a considerable feeling that the seventh day as a period of rest is good for body and mind. However, Sunday work has been widely adopted, it is stated, on account of heavy demands for output or because employers have been forced into it by a desire of their workpeople to obtain the double, or at least increased, pay. When adopted the hours are often considerably shorter than on other days, overtime is generally dispensed with, Saturday night shifts are frequently abandoned, and Sunday night shifts start at a later hour than usual.

About 50 orders, covering women, girls, and boys, and another 30 for boys only, have been issued permitting Sunday labor by "protected" persons, i. e., women and young persons under 18 years of age, but in these cases, as a rule, Sunday labor has been sanctioned only when the hours of labor on other days of the week are moderate. Even when Sunday work has been allowed certain restrictions have

¹ Great Britain. Ministry of munitions. Health of munition workers committee. Memorandum No. 1, Report on Sunday labor; Memorandum No. 2, Welfare supervision; Memorandum No. 3, Report on industrial canteens. London, 1915. 3 pamph. (20 p.)

been imposed: (1) Women and young persons shall not be employed on two consecutive Sundays; (2) they shall have time off on Saturday; (3) they shall only be employed on Sunday in cases of emergency; and (4) they shall be employed for a portion of the day only.

Asserting that statistical evidence in respect to Sunday work is not available, the committee ascertained from many employers that "seven days only produce six days' output; that reductions in Sunday work have not, in fact, involved any appreciable loss of output, and even the least observant of the managers seem to be impressed with the fact that the strain is showing an evil effect. * * * There is undoubtedly some tendency toward a reduction or discontinuance of Sunday labor."

The trade-union officials and representatives of the workers seem clearly of opinion that "the men are beginning to get 'fed up' and are feeling the need of more rest, to which need is attributed much of the lost time."

The committee concludes that if maximum output is to be secured and maintained for any length of time, a weekly period of rest, preferably on Sunday, must be allowed, and that "except for quite short periods, continuous work is a profound mistake and does not pay—output is not increased." It is believed that Sunday work should be confined to sudden emergencies, and to repairs, tending furnaces, etc., the men so employed being given a rest period at some other time during the week. It is further concluded that the need for relief from Sunday labor is more urgent for "protected" persons than for adult males and for men on overtime than for those on double shifts. Should the stoppage of all Sunday work be considered difficult, if not impossible, to bring about, the committee believes that it will at least be practicable to lay down the principle that Sunday labor is an evil which should be steadily and systematically discouraged and restricted. Pending a general discontinuance of such labor, various ways are suggested in which an improvement might be effected:

1. Where two shifts are worked, to discontinue the practice by which the change from one shift to the other is made by requiring the men to work continuously for a period and a half instead of by closing down on Saturday night or during the period of the day shift on Sunday. Closure on Saturday night seems desirable even when the change of shift is made less often than once a week, since the night shift seems to be generally regarded as a greater strain than the day shift.

2. Where three 8-hour shifts are worked to omit one or two shifts on Sunday.

3. Where workers are employed only during the day with overtime, to reduce so far as possible the hours of work on Sunday.

4. To give all workers alternate Sundays off, or at the very least a Sunday off at frequent intervals—

- (a) By allowing a certain number to get off each Sunday.

- (b) By closing completely, say, one Sunday in every two or three.

(c) By closing alternately in particular departments.

5. To give another day off in place of Sunday or, at any rate, to let workers on long hours off early on Saturdays or at other times.

6. To increase the employment of relief gangs where this can be satisfactorily arranged for, by obtaining either—

(a) Relief workers amongst ordinary staff, or

(b) Relief week-end shifts of volunteers.

While the conclusions of the committee have reference to hours of labor of workers, it is urged that foremen and the higher management even more certainly require definite periods of rest. Summarizing, the committee says:

In conclusion the committee desire to emphasize their conviction that some action must be taken in regard to continuous labor and excessive hours of work if it is desired to secure and maintain, over a long period, the maximum output. To secure any large measure of reform it may be necessary to impose certain restrictions on all controlled establishments, since competition and other causes frequently make it difficult for individual employers to act independently of one another.

In its study of welfare supervision among munition workers, the committee found that "almost more important than the immediate or technical environment in which work is carried on and the length of hours during which the workers are employed," are four chief influences which affect industrial efficiency, namely, questions of housing, transit, canteen provision, and individual welfare of the employees. The committee suggests that the influx of workers in certain districts has seriously overtaxed housing accommodation; that many workers, because of inability to obtain housing accommodation near the factory, are compelled to travel to and from work, occasioning much loss of time; that the provision of facilities for obtaining a hot meal at the factory is often inadequate, especially for night workers; and, finally, that without special arrangement by which the management may deal with the numerous problems of labor efficiency and the personal welfare of the employees, there can not fail to be diminished output, discontent, and unsmooth working.

It is stated that welfare supervision has already been undertaken in a number of munition factories and testimony of managers is given commending the services rendered by welfare supervisors. In one factory, where men only are employed, an educated man devotes all his time to matters concerning welfare, in particular supervising safety appliances, organizing first-aid staffs and canteen accommodation, and in cases of injury and sickness visiting the workers at their homes. Instances of the successful work of women supervisors are mentioned, and employers stated to the committee that the presence of a capable woman of broad sympathies has in itself provided the best and quickest aid to the solution of many of the problems affecting women's labor by which they are assailed. The com-

mittee suggests that helpful oversight is especially needed in the case of women and girls if the highest and most enduring efficiency is to be attained, and recommends for this purpose the appointment of a competent woman of experience and sympathy, tactful and sensible in her dealings with others, who should concern herself with the various questions and issues raised in respect of the conduct of forewomen toward women workers, of the character and behavior of fellow women workers, of the maintenance of suitable and sufficient sanitary accommodation, of the worker's own state of health, of her capacity to withstand the physical strain and stress of work, and of her power to endure long hours, overtime, or nightwork. Welfare supervision in factories where not less than 500 men and 100 boys are employed is strongly urged.

The duties of welfare supervision as outlined by the committee include the following:

1. To be in close touch with the engagement of new labor, or, when desired, to engage the labor.
2. To keep a register of available houses and lodgings, to inform the management when housing accommodation is inadequate, and to render assistance to workers seeking accommodation.
3. To ascertain the means of transit used, and the length of time spent in traveling; to indicate the need of increased train, tram, or motor service; or to suggest modification of factory hours to suit existing means of transit.
4. To advise and assist workers in regard to feeding arrangements; to investigate the need for provision of canteen facilities, or any inadequacy in the provision already made; and to supervise the management of such canteens.
5. To investigate records of sickness and broken time arising therefrom; and in cases of sickness to visit, where desired, the homes of workers.
6. To investigate and advise in cases of slow and inefficient work or incapacity arising from conditions of health, fatigue, or physical strain.
7. To consider, particularly for delicate and young workers, all questions of sanitation and hygiene affecting health and physical efficiency, and to supervise the conditions of nightwork, Sunday work, long hours, and overtime.
8. To advise on means of recreation and educational work.
9. To investigate complaints and assist in the maintenance of proper discipline and good order.
10. To keep in touch with responsible organizations having for their object the promotion of the welfare of the worker.

Based upon the proposition that productive output in regard to quality, amount, and speed is largely dependent upon the physical efficiency and health of the workers, which in turn is dependent upon nutrition, and that a dietary containing a sufficient proportion and quantity of nutritive material, suitably mixed, easily digestible, and obtainable at a reasonable cost is essential, the committee expresses the conviction that "in the highest interest of both employer and worker, proper facilities for adequate feeding arrangements should be available in or near, and should form an integral part of, the equipment of all modern factories and workshops." Many em-

ployers, it is pointed out, have established industrial canteens, and this practice "has abundantly justified itself from a business and commercial point of view," and in the opinion of the committee "the time has come for a large extension of this method of solving the problem" of supplying suitable food at a low price for large numbers of persons for specified times. Speaking generally, the accommodation provided accords with one or other of the following types:

(1) An available room for the workers to eat their prepared food; (2) a room furnished with a "hot plate" or "warming cupboard" or provided with hot water; (3) a refreshment barrow to perambulate the workshops at appointed hours (particularly useful for light refreshments during long spells of night shifts); (4) a fixed refreshment bar or buffet; (5) a dining room supplying cheap hot and cold dinners; and (6) such dining room associated with an institute or club with facilities for rest and recreation.

In order to insure effective results of the establishment of industrial canteens, certain essential conditions are suggested and outlined, including accessibility and attractiveness, form, construction, and equipment, food and dietaries with suggested prices, prompt service, convenient hours, methods of payment for meals, and management.

The report indicates that substantial advantages, both to employers and workers, have followed the establishment of effective and well-managed canteens. Marked improvement in the health and physical condition of workers, a reduction of sickness, less absence and broken time, less tendency to alcoholism, an increased efficiency and output, a saving of time of the workmen, greater contentment, and better mid-day ventilation of the workshops are some of the benefits noted.

SOCIAL INSURANCE IN DENMARK.

According to the Danish statistical office, there was paid out by various elements of the population for social insurance during the years 1910 and 1914 the sum of 13,150,000 crowns (\$3,524,200) and 17,500,000 crowns (\$4,690,000), respectively. The various items for this and other forms of insurance were as follows:

INSURANCE PREMIUMS PAID IN DENMARK, 1910, 1914.

Kinds of insurance.	1910	1914
Fire insurance.....	\$3,634,800	\$4,904,400
Life insurance.....	6,217,600	8,710,000
Industrial accident insurance...	1,661,600	2,211,000
Sickness insurance.....	1,331,960	1,742,000
Burial insurance.....	201,000	268,000
Unemployment insurance.....	329,640	469,000
Marine insurance ¹	1,122,920	1,809,000
Live-stock insurance.....	1,013,040	* 1,310,000
Hail insurance.....	32,160	107,200
	15,544,000	21,560,600

¹ Not including special war risks.

* Estimated.

SOCIAL INSURANCE IN GERMANY.**INTRODUCTION.**

Germany began its organization of social insurance by the introduction of State compulsory sickness insurance in 1883; its system of workmen's compensation was organized in 1884; and its invalidity and old-age insurance system was begun in 1889. All of these insurance laws were revised and partially codified between the years 1899 and 1903, while a final codification was completed by the law of July 19, 1911.

EXTENT.

Wage earners insured against sickness are workmen, helpers, journeymen, apprentices and servants, establishment officials of various kinds, clerks and apprentices in commercial offices, members of the stage and of orchestras, teachers, home workers, and crews of German seagoing vessels not otherwise provided for. A wage earner is defined as one who works for compensation; salaried workers, of those enumerated above, must not have annual earnings exceeding 2,500 marks (\$595).

The extent of the accident insurance, so far as industries are concerned, is materially greater than that of the sickness insurance system. Under accident insurance are included mining and quarrying of every description, manufacturing plants, building work, communication and transportation, inland navigation and fishing, expressing and hauling, warehousing of every kind, and agricultural employments.

The invalidity and old-age insurance is identical in scope with that of the sickness insurance, save that the average annual earnings of the salaried employees must not exceed 2,000 marks (\$476).

All these three systems have a voluntary feature which permits insurance by persons in the higher-wage classes. There is in addition a special compulsory system (act of December, 1911) which includes salaried employees who do not come within the scope of the code of July, 1911.

Unemployment insurance also prevails in Germany but to a much more limited extent than the forms already indicated. The unemployment insurance system is not imperial in scope but confined to different municipalities. It usually takes three forms—subsidies by the different municipalities to industrial societies, or to savings societies, or public voluntary insurance. The system did not come into vogue until 1909. In 1912, the latest year for which such data are available, it appears that it was found in practice in 18 cities. In Berlin-Schöneberg, Stuttgart, Feuerbach, and Freiburg in Baden

subsidies by the city were made both to industrial societies and to savings societies and individuals.

In proportion to the population of the country the number of persons insured in the accident-insurance system was in 1913 approximately 39 per cent; in the sickness-insurance system, 22 per cent; and in the invalidity and old-age insurance system, 24 per cent. If a more proper comparison were made between the number insured and the total number of wage earners, the extent of the social insurance for the wage earners of the country would appear considerably greater. Calculations made at the time of the industrial census in 1907 show that 91.9 per cent of the wage earners in Germany in 1906 were subject to the invalidity and old-age insurance law. The estimated number of persons insured under the accident-compensation law in 1906 was in excess of the so-called wage earners, a fact due to the duplication of the same persons in agriculture and industry, and in part to the inclusion of a number of employers. Estimates by officials as to the number insured against sickness show that in 1906 the percentage was 80.7, and considering either actual or potential heads of families over 86 per cent were insured against sickness or temporary disability. The insurance code of 1911, which codified the separate, compulsory workmen's insurance laws, extended the system to classes of wage earners hitherto excluded. It is not an exaggeration to say, therefore, that practically the entire industrial population of Germany is protected by a system of compulsory insurance which provides compensation for loss of earning power due to industrial accidents, sickness, invalidity, and old age. Not merely are the wage earners themselves given economic assistance by the State, but their dependents and survivors were especially included in 1912.

BURDEN OF PAYMENT.

As already stated, the system of social insurance in Germany is State organized and compulsory.¹ The burden of payment for its support is distributed between the Government, the employers, and the employees. The figures in the following table show in what proportion the actual contributions toward its support have been distributed among the three parties since the year 1885. The first 13 weeks of accident disability expense for those insured in the accident system are provided for in the sickness-insurance system; to this expense the employer contributes one-third, the employee two-thirds. But after the 13 weeks the whole burden, as the table shows, is upon the employer. In the sickness-insurance system proper the

¹ For a full statement of the provisions of these laws and the benefits conferred by them, reference is made to the Industrial Insurance Code of 1911, which may be found in translation in Bulletin No. 96 of this Bureau.

burden is divided between the employer and the employee in the proportion of one-third for the former and two-thirds for the latter. The fact that the table shows this proportion a trifle less than the one-third prescribed may be explained as due to the inclusion of the voluntary feature of the sickness system in which the insured assumes the entire burden. In the invalidity system, the actual facts in the table are in conformity with the law; the insured pays a share equal to that of the employer, while the State contributes a uniform amount (50 marks or \$11.90) to each pension paid out, except to orphans' pensions, for which the subsidy is 25 marks (\$5.95).

DISTRIBUTION OF THE CONTRIBUTIONS TOWARD THE SUPPORT OF THE GERMAN SOCIAL INSURANCE SYSTEM, 1885 TO 1913.

Items.	Amounts.				Per cent.			
	Accident, 1885-1913.	Sickness, 1885-1913.	Invalidity and old age, 1891-1913.	Total.	Acci- dent.	Sick- ness.	In- valid- ity and old age.	Total.
Contributions by em- ployers.....	\$709,059,663	\$460,471,761	\$418,026,865	\$1,587,558,289	100	31.6	40.7	49.7
Contributions of in- sured persons.....		997,922,005	418,026,865	1,415,948,870	.....	68.4	40.7	44.3
Subsidy by Empire.....			191,981,177	191,981,177	.....	.....	18.6	16.0
Total.....	709,059,668	1,458,393,766	1,028,034,907	3,195,488,336	100	100.0	100.0	100.0

¹ For an exact showing the share of the Empire should include the administrative expenses which are largely borne by it, but in what proportions can not be stated.

BENEFITS PAID.

The maximum and minimum benefits of the insurance system can not be stated definitely as they are proportional to the earnings of the insured person. Under the accident system, in case of death, funeral benefits are paid, equivalent to one-fifteenth of the annual earnings of the deceased, but not less than 50 marks (\$11.90); and pensions are paid to dependent heirs not exceeding 60 per cent of the annual earnings of the deceased. Compensation for disability consists of free medical and surgical treatment; for temporary or permanent total disability 50 per cent of the daily wages, but not exceeding 3 marks (71 cents) per day, paid from the beginning of the fourth day to the end of the fourth week, increased after the fourth week to 66⅔ per cent of the average annual earnings of the injured. For complete helplessness payments may be increased to 100 per cent of the annual earnings, and for partial disability a corresponding reduction in payments is made. In calculating both the death and the disability benefits, if the annual earnings exceed 1,800 marks (\$424.40), only one-third of the excess is considered in computing disability or pension payments.

The sickness insurance system provides free medical care and pecuniary benefits up to 50 per cent of the earnings of the insured during 26 weeks, or in lieu of the above free hospital treatment for the insured and one-half of the pecuniary benefits for the dependents. Similar benefits are paid in maternity cases during eight weeks. Funeral benefits are paid up to twenty times the average daily wages.

Under the invalidity and old-age insurance system, for the purpose of assessing contributions, one-half of which are paid by the insured, one-half by the employer, while the State pays an annual subsidy of 50 marks (\$11.90) to each pensioner, all wage earners are placed in five wage-earning classes, based upon estimated average annual earnings, and not, it should be noted, on actual earnings. The contributions are graded according to these classes. The wage classes and the weekly contributions are as follows:

Wage class.	Annual earnings.	Weekly contributions.
I	351 marks or under (\$83.30 or under).....	16 pfennigs (3.8 cents).
II	351 to 550 marks (\$83.30 to \$130.90).....	24 pfennigs (5.7 cents).
III	551 to 850 marks (\$130.90 to \$202.30).....	32 pfennigs (7.6 cents).
IV	851 to 1,150 marks (\$202.30 to \$273.70).....	40 pfennigs (9.5 cents).
V	1,151 marks or over (\$273.70 or over).....	48 pfennigs (11.4 cents).

The benefits provided by the system are two: (1) Pensions, i. e., invalidity pensions for permanent disability and sickness, pensions for temporary disability, and old-age pensions and pensions to survivors; (2) certain miscellaneous benefits, such as medical treatment or care in institutions, etc.

To become entitled to the benefits of the insurance, the insured person must have paid the regular dues or contributions for specified periods of time, designated as the "waiting time." For invalidity pensions this period is 200 weeks, provided that during this time at least 100 weekly contributions have been made; otherwise the waiting time is 500 weeks. For old-age pensions the waiting time is 1,200 weeks of contributions.

The annual amount of old-age pension payable at age of 70 to those insured in each of the five classes of wage earners is as follows:

Wage class.	Insurance pension.	State subsidy.	Total.
I	60 marks (\$14.28).....	50 marks (\$11.90).....	110 marks (\$26.18).
II	90 marks (\$21.42).....	50 marks (\$11.90).....	140 marks (\$33.32).
III	120 marks (\$28.56).....	50 marks (\$11.90).....	170 marks (\$40.46).
IV	150 marks (\$35.70).....	50 marks (\$11.90).....	200 marks (\$47.60).
V	180 marks (\$42.84).....	50 marks (\$11.90).....	230 marks (\$54.74).

As the wage earners during the time when they are paying pension premiums are probably shifting from one wage-earning group to another, no particular individual will receive any one of the indicated amounts of pension, but will be in receipt of some different amount, varying from the highest to the lowest.

The calculation of the amounts of the invalidity and temporary disability pensions is somewhat complex. The amount provided by the insurance consists of two parts, the basic amount and the supplementary amount. The basic amount of the invalidity pension varies from 60 marks (\$14.28) for the lowest wage-earning class up to 100 marks (\$23.80) for the highest or fifth class. The amount of the supplementary increase is dependent upon the number of weeks for which contributions have been paid. To these two sums, then, the basic and the supplementary amounts, is added the imperial subsidy to each pension of 50 marks (\$11.90), so that the minimum amount of invalidity pension for each of the classes of wage-earners would be as follows:

Wage class.	Minimum pension.
I.....	116.4 marks (\$27.70).
II.....	126.0 marks (\$29.99).
III.....	134.4 marks (\$31.99).
IV.....	142.2 marks (\$33.84).
V.....	150.0 marks (\$35.70).

STATISTICS OF OPERATION.

The study of the social insurance system of Germany, which appeared as a part of the Twenty-Fourth Annual Report of the Commissioner of Labor, 1909, included data extending through the year 1908. The following tables present summarized statistics of operation for the years 1911, 1912, and 1913.

The table which follows shows the number insured in the different systems in proportion to the estimated average population for the years 1909 to 1913, inclusive. It shows, among other things, that a very much larger proportion of the population is covered by accident insurance than by either of the other two forms, due to the fact that a larger number of industries are included under the accident insurance system.

TABLE 1.—NUMBER AND PER CENT OF POPULATION IN GERMANY COVERED BY EACH CLASS OF SOCIAL INSURANCE, 1909 TO 1913.

[Source: Statistisches Jahrbuch für das Deutsche Reich, vols. 32 to 36. Berlin, 1911-1915.]

Year.	Average total population.	Accident insurance.		Sickness insurance.		Invalidity and old-age insurance.	
		Number of persons insured. ¹	Per cent of population.	Number of persons insured. ²	Per cent of population.	Number of persons insured.	Per cent of population.
1909.....	63,879,000	23,767,000	37.2	13,404,298	21.0	15,444,300	24.2
1910.....	64,551,000	24,154,000	37.4	13,954,973	21.6	15,659,700	24.3
1911.....	65,429,000	24,627,000	37.6	14,518,764	22.2	15,878,000	24.3
1912.....	66,096,000	24,990,000	37.8	15,110,046	22.9	16,099,400	24.4
1913.....	66,835,000	25,800,000	38.6	14,555,669	21.8	16,323,800	24.4

¹ After deduction of duplications for persons insured in more than one trade accident association, estimated to number 3,400,000.
² Including miners' sick funds.

Table 2, which relates to the accident insurance system, shows that the compensation payments for each accident subject to compensation during 1913 amounted to \$41.60, and that the cost of administration per accident compensated was \$7.60.

Table 3, relating to the sickness insurance system, shows that the cost of sickness per member was \$7.36 in 1913. The cost of administration per member for the same year was 50 cents.

Tables 4 and 5 relate to the system of invalidity and old-age insurance, Table 4 showing the actual amounts of the different items for the years 1911 to 1913 and for the period 1891 to 1913, while Table 5 shows the average amount of the different kinds of pensions paid. That the different forms of pensions granted are not very large, measured by American standards, is quite apparent. The average invalidity pension in 1913 was \$46.51, with no material change since 1909; the average sickness pension amounted to \$48.45, and the average old-age pension to \$39.75. The pensions to survivors were even smaller, averaging a trifle less than \$19.

TABLE 2.—STATISTICS OF THE GERMAN ACCIDENT INSURANCE SYSTEM, 1885 TO 1913.

[Source: Statistisches Jahrbuch für das Deutsche Reich, vol. 36, 1915. Berlin, 1915.]

Items.	1885 to 1913	1911	1912	1913	Amount per accident compensated.		
					1911	1912	1913
Accidents compensated.....	2,681,966	1,018,075	1,014,122	1,010,495	.....	.....	.....
Accidents compensated for the first time during the year.....	.....	132,114	137,089	139,633	.....	.....	.....
Ordinary receipts:							
Contributions of employers....	\$709,059,668	\$46,848,420	\$55,877,832	\$46,333,683	\$46.02	\$45.24	\$45.85
Interest, etc.....	99,418,883	7,343,942	7,784,671	8,231,920	7.21	7.68	8.15
Total ordinary receipts.....	808,478,551	54,192,362	63,662,503	54,565,603	53.23	52.92	54.00
Ordinary disbursements:							
Total compensations.....	591,736,068	39,653,394	40,532,019	42,039,868	38.95	39.97	41.60
Sickness care included in total compensations).....	44,968,125	2,741,665	2,901,339	3,118,395	2.70	2.86	3.09
Costs of administration.....	105,001,530	7,085,118	7,315,834	7,674,786	6.96	7.21	7.60
Total ordinary disbursements.....	666,186,681	48,211,184	49,312,315	51,206,771	47.35	48.63	50.67
Net assets.....	.....	134,582,550	138,932,738	142,291,870	132.19	137.00	140.81

¹ In 1909 the Post Office Department paid out compensations amounting to \$38,056,200, for the account of the insurers, which were not refunded by the latter. By the law of July 15, 1909, the above advance was commuted into a floating debt which is to be refunded with 3½ per cent each year and bears 3½ per cent interest. In the present table the entire amount of the floating debt is included in the compensation paid during the period 1885-1913, but not in the total ordinary disbursements. There is included in the total ordinary disbursements for each year, 1911, 1912, and 1913, so much of it as is paid on account each year, including principal and interest.

TABLE 2.—STATISTICS OF THE GERMAN ACCIDENT INSURANCE SYSTEM, 1885 TO 1913 -
Concluded.

Items.	1885 to 1913	1911	1912	1913	Amount per accident compensated.		
					1911	1912	1913
Compensation payments:							
Medical treatment.....	14,271,503			91	.85	.80	.97
Care during waiting time.....	3,707,611			01	.29	.32	.39
Hospital treatment.....	31,162,964			48	1.21	1.29	1.41
Benefits to dependents during treatment.....	5,826,026			04	.35	.36	.40
Disability benefits.....	423,222,381			19	27.50	27.77	28.30
Lump-sum settlements.....	5,967,422			76	.56	.76	1.20
Funeral benefits.....	3,213,689			27	.17	.19	.21
Survivors' pensions.....	100,179,454			24	7.63	8.05	8.53
Lump-sum payments to widows.....	3,947,682			57	.24	.27	.28
Lump-sum payments to aliens.....	1,235,196			80	.07	.07	.10
Total amount compensated.....		94	40,512,049	42,039,868	38.95	39.97	41.00

TABLE 3.—STATISTICS OF GERMAN SICKNESS INSURANCE INCLUSIVE OF MINERS' FUNDS¹ FOR THE YEARS 1911, 1912, AND 1913 AND FOR THE PERIOD 1885 to 1913.

[Source: Statistisches Jahrbuch für das Deutsche Reich, vol. 36, 1915. Berlin, 1915.]

Items.	Total, all funds.				Per member.		
	1885-1913	1911	1912	1913	1911	1912	1913
Number of funds.....		22,937	* 21,490	* 21,238			
Average membership.....		14,518,764	14,150,582	14,535,669			
Cases of sickness involving disability.....	112,047,026	6,308,009	6,525,858	6,630,840			
Days of sickness involving payment of pecuniary benefits or hospital treatment.....	2,065,991,736	124,372,461	128,381,213	133,685,017			
Ordinary receipts (interest, entrance fees, contributions, subsidies, and miscellaneous receipts exclusive of receipts for invalidity insurance).....	*\$1,526,371,207	*\$106,621,626	*\$115,577,084	*\$121,239,239	\$7.34	\$8.17	\$8.38
Contributions of employers.....	400,471,761	33,428,052	36,274,673	38,246,695	2.30	2.56	2.63
Contributions of insured persons.....	997,922,005	68,776,502	74,056,437	77,062,565	4.72	5.23	5.34
Ordinary disbursements (costs of sickness, refund of contributions and entrance fees, costs of administration exclusive of those for invalidity insurance, miscellaneous disbursements).....	1,423,794,350	100,745,067	107,493,224	116,700,587	6.94	7.60	8.02
Costs of sickness.....	1,319,237,142	93,204,275	99,241,883	106,933,257	6.42	7.01	7.36
Costs of administration (exclusive of those for invalidity insurance).....	82,277,100	5,663,341	6,201,376	7,246,933	.39	.44	.50
Net assets.....		* 80,509,022	* 86,251,105	* 88,974,872	5.55	6.10	6.11

¹ The sickness insurance statistics of miners' funds included here are according to the official statement somewhat inaccurate by reason of the fact that sickness and invalidity insurance are jointly administered in some miners' funds so that the financial data relating to these two kinds of insurance can not always be separated and must be estimated.

* Exclusive of auxiliary funds (*Hilfskassen*) abolished by the law of Dec. 20, 1911.

² Refunds by sick funds and trade accident associations as well as refunds of contributions and entrance fees were deducted from the ordinary receipts.

³ Ordinary receipts and disbursements as shown here include only cash items. The net assets as shown here include also book items and therefore do not represent the excess of receipts over disbursements.

TABLE 4.—STATISTICS OF THE INVALIDITY AND OLD-AGE STATE COMPULSORY INSURANCE SYSTEM IN GERMANY, 1891 TO 1913.

[Source: Statistisches Jahrbuch für das Deutsche Reich, vol. 36, 1915. Berlin, 1915.]

Items.	1891—1913	1911	1912	1913
Number of invalidity pensions in force.....	2, 239, 932	1, 036, 893	1, 065, 700	1, 099, 783
Number of sickness pensions in force.....	¹ 150, 610	28, 747	27, 3×3	27, 711
Number of old-age pensions in force.....	528, 599	109, 924	105, 480	101, 977
Number of widows and widowers' pensions in force.....	² 12, 285	.....	3, 811	11, 500
Number of widows' sickness pensions in force.....	413	.....	110	350
Number of orphans' pensions.....	39, 881	.....	13, 962	37, 000
Number of widows' moneys paid.....	.....	.....	4, 118	8, 022
Number of orphans' settlements paid.....	.....	.....	108	460
Ordinary receipts:				
Contributions of employers.....	\$418, 026, 865	\$24, 966, 866	\$32, 536, 813	\$34, 504, 359
Contributions of insured persons.....	418, 026, 865	24, 966, 866	32, 536, 813	34, 504, 359
Subsidy of the Empire.....	191, 981, 177	12, 681, 378	13, 106, 494	13, 929, 212
Interest, etc.....	185, 817, 810	14, 363, 086	17, 005, 148	16, 866, 275
Total ordinary receipts.....	1, 213, 852, 717	76, 978, 196	95, 185, 268	99, 804, 205
Ordinary disbursements:				
Total disbursements for benefits.....	641, 606, 802	48, 520, 179	48, 835, 672	51, 964, 111
Sick benefits (included in total benefits).....	56, 647, 570	5, 649, 001	6, 060, 123	6, 805, 872
Costs of administration.....	71, 139, 890	5, 334, 461	5, 942, 265	5, 858, 727
Total ordinary disbursements.....	712, 746, 692	53, 854, 640	54, 777, 937	57, 822, 838
Net assets.....	.....	418, 728, 180	459, 124, 681	501, 107, 001
Benefit payments:				
Medical treatment.....	53, 503, 804	5, 254, 873	5, 633, 341	6, 303, 501
Additional sick benefits.....	3, 143, 766	394, 128	426, 782	502, 470
Care in institutions.....	1, 650, 173	216, 841	286, 846	298, 714
Invalidity pensions.....	430, 502, 087	36, 016, 564	37, 749, 513	39, 816, 115
Sickness pensions.....	9, 300, 731	755, 721	761, 505	822, 338
Old-age pensions.....	114, 427, 425	3, 443, 455	3, 344, 543	3, 269, 573
Other benefit payments.....	29, 078, 816	2, 438, 667	658, 332	951, 570
Total disbursements for benefits.....	641, 606, 802	48, 520, 179	48, 835, 672	51, 964, 111

¹ Sickness pensions paid only since 1900.
² Survivors' insurance has been applicable only since 1912.

TABLE 5.—NUMBER AND AVERAGE AMOUNT OF PENSIONS NEWLY AWARDED UNDER THE INVALIDITY AND OLD-AGE INSURANCE LAW, 1909 TO 1913.

[Source: Amtliche Nachrichten des Reichs-Versicherungs-Amt. Berlin.]

Year.	Invalidity pensions.		Sickness pen-sions.		Old-age pen-sions.		Widows' and widowers' pensions.		Widows' sick-ness pen-sions.		Orphans' pen-sions.	
	Num-ber.	Aver-age amt.	Num-ber.	Aver-age amt.	Num-ber.	Aver-age amt.	Num-ber.	Aver-age amt.	Num-ber.	Aver-age amt.	Num-ber.	Aver-age amt.
1909.....	116, 294	\$41. 60	12, 884	\$41. 45	11, 036	\$38. 93	.....	.....	.....	.....	.....	.....
1910.....	114, 755	42. 11	12, 287	41. 83	11, 625	39. 11	.....	.....	.....	.....	.....	.....
1911.....	118, 158	42. 86	11, 789	42. 24	11, 585	39. 34	.....	.....	.....	.....	.....	.....
1912.....	124, 825	44. 50	17, 570	45. 76	12, 111	39. 54	3, 811	\$18. 34	110	\$18. 46	13, 962	\$19. 25
1913.....	134, 161	46. 51	11, 809	48. 45	11, 905	39. 75	8, 479	18. 49	303	18. 59	25, 916	19. 07

MINERS' ACCIDENT INSURANCE STATISTICS IN GERMANY, 1914.

In its thirtieth annual report for the year 1914¹ the Miners' Trade Accident Association (*Knappschafts-Berufsgenossenschaft*), the carrier of the German workmen's accident insurance for the mining industry, notes that like other industries the mining industry has suffered greatly from the war. During the year the number of persons employed in mining decreased by 8.5 per cent, and the total wages paid to insured persons in the industry in 1914 was 13 per cent less than in 1913. The amount of assessments levied upon employers for the support of the insurance system decreased 5 per cent, due, it is explained, not to a decrease of the amount of compensation paid, but to the fact that a desired increase of 2,500,000 marks (\$595,000) in the capital of the accident association which had been made in 1913 and was contemplated in 1914 had to be foregone on account of the disorganization caused by the war.

The development in the number of establishments and workmen employed during the period 1886 to 1914 for the Miners' Trade Accident Association is shown in the table which follows:

NUMBER OF ESTABLISHMENTS, INSURED WORKMEN, AND AMOUNT OF WAGES PAID MINERS' ACCIDENT INSURANCE ASSOCIATION, 1886 TO 1914.

[Source: Dreissigster Bericht der Knappschafts-Berufsgenossenschaft, p. 30.]

Industry.	Year.	Number of—		Wages earned per workman.	Industry.	Year.	Number of—		Wages earned per workman.
		Estab-lish-ments.	Work-men.				Estab-lish-ments.	Work-men.	
Coal mining.....	1886	357	221,364	\$182.96	Salt mining.....	1886	50	8,713	\$226.50
	1896	337	311,233	235.48		1896	70	12,794	239.63
	1906	342	505,509	326.13		1906	128	30,358	293.54
	1914	340	642,908	373.34		1914	275	37,520	340.22
Lignite mining.....	1886	423	28,950	165.96	Extraction of other minerals.....	1886	254	4,991	142.28
	1896	534	41,391	191.43		1896	307	6,592	168.09
	1906	528	63,363	259.85		1906	439	8,121	226.05
	1914	484	72,640	307.76		1914	387	11,515	266.06
Ore mining and smelt-ing.....	1886	574	79,691	146.84	Total.....	1886	1,658	343,709	173.67
	1896	574	74,332	185.30		1896	1,822	446,342	222.16
	1906	749	81,897	244.69		1906	2,186	689,248	307.74
	1914	410	76,535	310.05		1914	1,896	841,118	358.97

¹ Dreissigster Bericht über die Verwaltung der Knappschafts-Berufsgenossenschaft für das Jahr 1914. Berlin, 1915. 69 pp.

The absolute and relative number of all accidents reported, as well as of the compensated accidents and their results, and the amount of compensation paid by industries represented in the Miners' Trade Accident Insurance Association are shown in the following table:

NUMBER OF ACCIDENTS AND THEIR RESULTS, AND TOTAL COMPENSATION PAID
MINERS' TRADE ACCIDENT INSURANCE ASSOCIATION, 1913 AND 1914.

[Source: Dreißigster Bericht der Knappschafts-Berufsgenossenschaft, pp. 36 to 39.]

Industry.	Year.	Insured persons injured in accidents.		Number of compensated accidents.	Compensated accidents resulting in—				Compensated accidents per 10,000 insured persons, resulting in—			Compensations paid.	
		Number.	Per 1,000.		Death.	Permanent total disability.	Permanent partial disability.	Temporary disability.	Death.	Permanent disability.	Temporary disability.	Amount.	Per \$10,000 wages.
Coal mining.....	1913	112,180	162.73	11,212	1,680	48	1,917	7,137	24.37	28.51	109.78	\$5,475,692	\$200.34
	1914	105,327	163.83	10,412	1,549	57	1,669	7,567	24.09	26.85	111.01	5,686,268	236.91
Lignite mining.	1913	9,063	116.38	890	126	5	376	383	16.18	48.92	49.18	445,234	183.71
	1914	8,147	112.16	874	155	2	325	392	21.34	45.02	53.96	477,196	213.46
Ore mining and smelting.....	1913	7,830	88.58	936	160	7	250	519	18.10	29.07	58.71	600,381	210.56
	1914	6,219	81.26	816	133	6	202	475	17.38	27.18	62.06	611,737	257.80
Salt mining.....	1913	4,074	81.70	599	138	7	213	241	27.68	44.12	48.33	260,746	150.22
	1914	2,753	73.37	464	102	7	160	195	27.19	44.51	51.97	283,714	222.26
Extraction of other minerals.....	1913	563	42.26	126	17	1	38	70	12.76	29.28	52.55	67,877	182.00
	1914	536	46.55	106	13	.....	36	57	11.29	31.26	49.50	71,202	232.41
Total.....	1913	133,710	145.53	13,763	2,121	68	2,794	8,780	23.08	31.15	95.56	6,849,930	197.32
	1914	122,982	146.21	12,672	1,952	72	2,392	8,256	23.21	29.29	98.16	7,130,117	236.15

From this table there is noted a decrease in the number of accidents, which is due to a decrease in the number of persons insured, indicated by the fact that the accident rate per 1,000 insured persons shows a slight increase over 1913; and a decrease in the number of compensated accidents would naturally follow a decrease in the number of accidents reported. The death rate of insured persons has remained stationary, but the rate for permanent disability has decreased, while the rate for temporary disability has increased. This would suggest increased efficiency in first aid and general medical care. The amount of compensation paid has increased 4.1 per cent, and the rate of compensation per \$10,000 of wages earned has increased from \$197.33 to \$236.15, or 19.7 per cent, due to the fact that the number of insured persons, and consequently the total amount of wages earned by them, decreased during the year.

As to the fault of accidents it is reported for 1913 and 1914 that practically two-thirds have been due to occupational risk, that a trifle

over one-fourth have been due to the fault of the workman himself, and the remaining one-twelfth have been due to special defects in operation and fault of fellow workmen.

In 1914 the Miners' Accident Association reported 12,672 accidents, distributed by causes, as follows:

NUMBER AND PER CENT OF ACCIDENTS REPORTED BY THE MINERS' ACCIDENT ASSOCIATION IN 1914, BY CAUSES.

Cause of accidents.	Num-ber.	Per cent.	Cause of accidents.	Num-ber.	Per cent.
Motors and transmission of power, machinery.....	403	3.2	Teaming, vehicles.....	113	0.9
Lifts and cranes.....	1,271	10.0	Railroads.....	2,915	23.0
Boiler and steam pipe explosions..	24	.2	Animals.....	51	.4
Explosives.....	320	2.5	Tools.....	266	2.1
Heat, acids, steam, gases, etc.....	214	1.7	Electric currents.....	69	.6
Collapses or breakdowns.....	4,412	34.8	Miscellaneous causes.....	687	5.4
Falls from ladders, stairs, etc.....	947	7.5			
Loading and unloading by hand, lifting, carrying, etc.....	980	7.7	Total.....	12,672	100.0

In the course of a year there were paid out 29,958,475.06 marks (\$7,130,117.06) for compensation, of which 7.9 per cent was paid for medical treatment, sick benefits, etc.; 55.3 per cent for pensions and lump-sum settlement to injured persons; 0.7 per cent for funeral benefits; and 36.1 per cent for pensions and lump-sum payments to survivors. The total costs of the miners' accident insurance computed per workman and per \$1,000 wages for selected years during the period of 1886-1914 were as follows:

COSTS OF INSURANCE PER WORKMAN AND PER \$1,000 WAGES IN THE MINERS' TRADE ACCIDENT INSURANCE ASSOCIATION, FOR SELECTED YEARS, DURING THE PERIOD 1886 TO 1914.

[Source: Dreissigster Bericht der Knappschafts-Berufsgenossenschaft, p. 26.]

Year.	Costs of insur- ance per—		Year.	Costs of insur- ance per—	
	Work- man.	\$1,000 wages.		Work- man.	\$1,000 wages.
1886.....	\$1.80	\$8.20	1905.....	\$7.92	\$27.98
1890.....	3.57	16.65	1910.....	9.10	28.44
1895.....	4.85	22.76	1913.....	8.51	22.51
1900.....	4.54	17.23	1914.....	8.83	24.59

As compared with 1913 the cost of insurance in 1914 increased 1.34 marks (31.9-cents) per workman and \$2.08 per \$1,000 wages earned. The report under review notes that this increase has taken place in spite of the fact that the total assessments levied were 1,500,000 marks (\$357,000), or 5 per cent less than in the last preceding year, and that it is to be explained by the fact that on account of the war the

number of insured persons has decreased, as already noted, by 8.5 per cent, and the total wages paid by 13 per cent.

INTERNATIONAL TRADE-UNION STATISTICS.

This bureau has prepared the following two tables from the latest official sources available, showing the membership in trade-unions in the years 1912, 1913, and 1914 in each of 14 principal countries, including the United States. It should be said that these figures are by no means complete, and, furthermore, that they are not comparable as between the different countries except in the most general way. They serve, however, as an indication of the development of the trade-union movement within the respective countries.

The table relating to the distribution of the annual disbursements of trade-unions in various countries relates to the year 1912, the latest for which information with any degree of completeness is available.

MEMBERSHIP OF TRADE-UNIONS IN VARIOUS COUNTRIES FOR THE YEARS 1912, 1913, AND 1914.¹

Country.	Membership.					
	1912		1913		1914	
	Total.	Number of women.	Total.	Number of women.	Total.	Number of women.
Australia (Commonwealth)...	497,925	20,204	.....	.....	.....	.....
Austria.....	692,681	69,340	748,760	65,652	.....	.....
Belgium.....	231,835	.....	202,746	.....	.....	.....
Denmark.....	139,012	15,896	152,787	.....	155,783	.....
France.....	1,027,059	96,008	1,026,302	89,346	.....	.....
Germany.....	3,753,807	318,868	3,835,660	332,567	.....	.....
Great Britain.....	3,281,003	318,443	3,928,191	357,783	3,959,863	352,944
Italy.....	971,667	.....	.....	.....	.....	.....
Netherlands (Dec. 31).....	189,030	8,394	220,275	8,809	.....	.....
New Zealand.....	60,622	.....	71,544	.....	.....	.....
Norway.....	60,975	.....	64,108	4,156	67,235	4,809
Sweden (Dec. 31).....	87,024	.....	97,252	.....	101,207	.....
Switzerland.....	131,380	16,487	.....	.....	.....	.....
United States.....	2,389,723	.....	2,604,701	.....	.....	.....

¹ The official publications from which figures were taken are as follows: Australia.—Commonwealth Bureau of Census and Statistics, Labor and Industrial Branch, Report No. 5, p. 7. Austria.—Die Arbeits-einstellungen und Aussperrungen in Oesterreich während des Jahres 1912. Herausgegeben vom k. k. Arbeitsstatistischen Amte im Handelsministerium. Appendix, pp. 102 ff.; 1913, pp. 80 ff. Belgium.—Revue du Travail 1914, p. 754. Denmark.—Statistisk Aarbog, 1913, p. 130; 1914, p. 132; 1915, p. 140. France.—Bulletin du Ministère du Travail et de la Prévoyance Sociale, 1913, p. 1173; 1915, p. 29. Germany.—Statistisches Jahrbuch für das Deutsche Reich, 1915, p. 79*; annual average. Great Britain.—The Board of Trade Labor Gazette, 1914, p. 123; 1915, p. 318. Italy.—Bollettino dell' Ufficio del Lavoro, 1914, p. 71. Netherlands.—Bijdragen tot de Statistiek van Nederland, Nieuwe volgrees, Beknopt overzicht van den omvang der Vakbeweging op 1 Januari, 1914, p. 7. New Zealand.—Twenty-third Annual Report of the Department of Labor, 1914, p. 7. Norway.—Arbeidernes faglige Landsorganisation Beretning, 1913, 1914. Sweden.—Sociala Meddelanden, 1913, p. 741; 1914, p. 1049; 1915, p. 1254. Switzerland.—Schweizerischer Gewerkschaftsbund, Jahresbericht, 1912. United States.—Bulletin of the Department of Labor, State of New York, 1913, No. 56, p. 407; exclusive of membership in Canada and including only those unions from which actual returns were received; No. 67, p. 1.

DISTRIBUTION OF THE ANNUAL DISBURSEMENTS OF TRADE UNIONS IN VARIOUS COUNTRIES FOR THE YEAR 1912.

[Source: Supplement 11 to the Reichsarbeitsblatt, pt. 2, pp. 68, 69, Berlin, 1915.]

Country.	Membership.		Total disbursements.	Unemployment and traveling benefits.		Sickness, invalidity, funeral, and other social benefits.		Strike and lock-out benefits.		Administration, propaganda, legal aid, publications, libraries, etc.	
	Number.	Per cent of total.		Amount.	Per cent.	Amount.	Per cent.	Amount.	Per cent.	Amount.	Per cent.
Germany.....	13,007,074	80.1	\$16,375,933	\$2,330,744	14.23	\$3,721,861	22.73	\$3,465,914	21.16	\$6,857,414	41.88
	529,040	14.1	2,941,481	14,238	.....	341,988	.....	75,281	.....	509,974	.....
Great Britain..	2,000,102	61.0	18,562,775	2,901,769	15.63	5,571,298	30.02	6,675,337	35.96	3,414,371	18.39
Austria.....	580,279	83.8	2,703,498	401,958	14.87	590,680	21.85	324,996	12.02	1,385,864	51.26
Sweden.....	119,866	98.4	505,927	64,228	12.69	26,130	5.17	138,283	27.33	277,286	54.81
Netherlands..	60,414	32.0	326,254	23,532	7.21	58,084	17.81	68,467	20.98	176,171	54.00
Denmark.....	130,638	94.0	746,406	418,197	56.03	47,454	6.36	66,878	8.96	213,879	28.65
Switzerland..	86,313	65.7	307,477	27,058	8.80	97,060	31.57	73,442	23.88	109,917	35.75
Norway.....	60,975	90.6	431,553	39,662	9.19	167,787	38.88	141,861	32.87	82,243	19.06
United States	1,770,145	70.1	.....	255,867	.....	2,500,074	.....	.....	.....	.....	.....

¹ Social-democratic, Christian, and Hirsch-Duncker trade unions.
² Independent trade societies and nonmilitant workmen's federations and societies.
³ Bulletin of the Department of Labor, State of New York, 1913, p. 413; only data relating to benefit expenditures are discussed in the Bulletin.

IMMIGRATION IN FEBRUARY, 1916.

During the month of February there were 7,447, or 43.1 per cent, more immigrant aliens admitted to the United States than in the preceding month. Compared with February, 1915, there was an increase of 10,867, or 78.3 per cent, in the number admitted; but there were 22,133, or 47.2 per cent, fewer persons admitted than in February, 1914. The following table shows the total number of immigrant aliens admitted during December, January, February, and March, 1914-15, and the three last-named months in 1916:

IMMIGRANT ALIENS ADMITTED INTO THE UNITED STATES IN SPECIFIED MONTHS, 1914, 1915, AND 1916.

Month.	1914	1915	1916
December.....	20,944	18,901	.....
January.....	44,708	15,481	17,293
February.....	46,873	13,873	24,740
March.....	92,621	19,263	27,616

The largest number of immigrants for some months past has come from Italy, England, and the Scandinavian countries, in the order named.

Classified by races, the immigrant aliens admitted into and emigrant aliens departing from the United States during February, 1915 and 1916, were as follows:

IMMIGRANT ALIENS ADMITTED TO AND EMIGRANT ALIENS DEPARTING FROM THE UNITED STATES, FEBRUARY, 1915 AND 1916.

Races.	Admitted.		Departed.	
	1915	1916	1915	1916
African (black).....	89	129	70	42
Armenian.....	25	68	14	15
Bohemian and Moravian.....	70	51	3	2
Bulgarian, Servian, Montenegrin.....	82	124	181	1
Chinese.....	138	90	76	110
Croatian and Slavonian.....	51	27	6	12
Cuban.....	70	57	69	104
Dalmatian, Bosnian, and Herzegovinian.....	5	1	1	.....
Dutch and Flemish.....	553	410	40	29
East Indian.....	5	5	4	3
English.....	2, 137	2, 579	554	423
Finnish.....	155	835	39	31
French.....	695	1, 164	125	145
German.....	860	823	43	50
Greek.....	313	647	356	324
Hebrew.....	641	1, 103	32	27
Irish.....	923	1, 153	120	64
Italian (north).....	657	402	238	178
Italian (south).....	2, 448	3, 871	2, 813	799
Japanese.....	668	494	59	57
Korean.....	.....	12	.....	5
Lithuanian.....	15	50	13	.....
Magyar.....	38	98	16	32
Mexican.....	484	4, 175	30	43
Pacific Islander.....	2	.....	.....	.....
Polish.....	101	368	47	18
Portuguese.....	70	2, 454	133	57
Roumanian.....	6	59	5	9
Russian.....	128	514	566	155
Ruthenian (Russniak).....	28	42	.....	2
Scandinavian.....	1, 107	1, 164	96	233
Scotch.....	731	908	148	95
Slovak.....	25	46	.....	2
Spanish.....	270	493	124	152
Spanish-American.....	56	97	33	73
Syrian.....	46	34	16	.....
Turkish.....	21	6	4	3
Welsh.....	74	70	13	9
West Indian (except Cuban).....	30	32	24	39
Other peoples.....	56	85	22	16
Not specified.....	.....	.....	953	676
Total.....	13, 873	24, 740	7, 086	4, 035
Per cent increase, 1916.....	.....	78. 3	.....	1 43. 1

¹ Decrease.

OFFICIAL REPORTS RELATING TO LABOR.

UNITED STATES.

California.—*Commission of Immigration and Housing. The home teacher: The act, with a working plan and 40 lessons in English. Sacramento, 1915. 50 pp.*

Contains a copy of the act which became effective August 8, 1915, an act which permits boards of education to employ home teachers to work in the homes of the pupils, instructing children and adults in matters relating to school attendance; also in sanitation, in the English language, in household duties, and in the fundamental principles of the American system of government and the rights and duties of citizenship. This pamphlet contains a plan of 40 tentative lessons in English.

California.—*Industrial Accident Commission. Decisions of the Industrial Accident Commission of California. Vol. II, Nos. 12, 13. San Francisco, [1915].*

Illinois.—*Miners' and Mechanics' Institutes. First annual report of the director for the year 1914. Urbana, Ill., the University of Illinois. [1915.] 34 pp. (University of Illinois bulletin, vol. 12, No. 26.)*

Miners' and mechanics' institutes were created by special law in 1910 for the purpose of investigating and preventing accidents in mines and other industrial plants and to conserve the resources of the State. They are authorized to promote the education and training of all classes of industrial workers. They have conducted classes of mine employees, instructing them regarding the maintenance of safety in their work.

Two-year courses have been organized in 13 different towns, of which an aggregate of 464 sessions were held with a total attendance of 11,897. A short course of six weeks' instruction at the University of Illinois is also provided for. At this course 132 lectures were delivered and 43 laboratory sessions conducted, the total attendance being 1,213 for a total enrollment of 33.

The report recommends an increased appropriation (\$15,000 to \$55,000) and an increased extension of its work both by organizing more classes and by establishing correspondence courses.

Illinois.—*Miners' and Mechanics' Institutes.*

Mine gases and safety lamps, by R. Y. Williams and H. E. Smith. Urbana, Ill. [1914.] 58 pp. (Instruction pamphlet No. 2; University of Illinois bulletin, vol. 12, No. 9.)

Ventilation. Urbana, Ill. [1914.] 64 pp. (Instruction pamphlet No. 3; University of Illinois bulletin, vol. 11, No. 49.)

——— *State Mining Board. Thirty-fourth annual report of Illinois State Mining Board, 1915. [Springfield, 1915.] 295 pp.*

The following summary table shows the principal totals of operations for the years 1914 and 1915.

SUMMARY OF COAL-MINE OPERATIONS FOR THE YEARS 1914 AND 1915.

Summary Items.	1914	1915
Number of mines and openings	796	779
Output (tons of 2,000 lbs.).....	60,715,795	57,601,694
Tons shipped.....	45,038,119	41,461,218
Tons sold to railroad companies.....	10,096,939	11,090,377
Tons sold to local trade.....	2,400,985	2,184,853
Tons sold or wasted at plants.....	2,470,161	2,249,347
Average days of active operation (shipping mines).....	174	172
Average days of active operation all mines.....	162	158
Number of mining machines in use.....	1,828	1,686
Number of tons undercut by machines.....	31,446,823	34,037,426
Number of tons mined by hand.....	29,268,972	23,564,268
Average number of miners employed during the year.....	32,262	29,560
Average number of other employees underground (men).....	39,281	38,622
Average number of boys employed underground.....	1,492	1,190
Average number of employees above ground.....	7,000	6,235
Total number of employees (average).....	80,035	75,607
Average price paid per gross ton for hand mining (shipping mines).....	\$0.6575	\$0.666
Average price paid per gross ton machine mining.....	\$0.524	\$0.52
Number of men accidentally killed.....	159	180
Number of men injured, incapacity 1 month or more.....	1,071	1,013
Number of gross tons mined to each life lost.....	381,860	320,009
Number of employees to each life lost.....	503	420
Number of deaths per 1,000 employees.....	1.99	2.38
Number of tons mined to each man injured.....	56,691	56,862
Number of employees to each man injured.....	75	75

Detailed tables relative to output, days of operation, number employed, expenses, machine production, pick mine production, etc., are given for the State and for each of the 12 mining districts separately.

Michigan.—*Annual report of the inspector of mines, Gogebic County, 1913-14 and 1914-15.* 68 pp.

Gives the amount of ore mined and number of men employed in each mine in the county; also detailed description of each fatal accident, including the name of injured miner and the circumstances of the injury. During 1914-15, 3,154,124 tons of ore were mined, as against 4,209,267 in 1913-14. There were 23 fatal accidents in 1913-14 and 8 in 1914-15.

Missouri.—*Bureau of Labor Statistics. Missouri Red Book, 1914. Jefferson City. 1915.* 222 pp., folder. Illus.

Statistical details and information relating to all departments of labor, and especially in relation to the commercial, industrial, social, educational, and sanitary conditions of the laboring classes. The following is a statement taken from a table based upon the reports received by mail from employers:

Reports were received from 2,237 factories and workshops, employing 184,098 persons, of whom 25,959 were injured by accidents, 82 resulting fatally, 82 in partial recovery only, and 25,795 in full recovery. Insurance as a protection to employees was carried by 2,015 employers for which \$534,595 was paid in premiums. The reports of 514 public-service corporations—telephone, electric railway, steam railroad, or mining companies—showed a total of 76,813 employees, among whom occurred 3,096 accidents, of which 127 resulted fatally. Only four of these corporations carried accident insurance, for which they paid in premiums \$4,065.

The operations of the State free employment exchanges during the year were as follows: Applications for employment, 37,047; Vacancies reported by employers, 33,526; Positions secured, 27,637.

Considerable data are given relative to organized labor, membership, wages, hours of labor and yearly earnings, out-of-work benefits paid, strike, sickness, etc., benefits; union scale of wages and hours of labor and overtime pay in St. Louis and Kansas City.

Missouri.—*Laws of Missouri, labor, industrial, and statistical, including certain session acts of 1913; * * * also certain factory-inspection regulations, 1913-1914. Prepared and published by the bureau of labor statistics. Jefferson City, Mo. [1915?] 99 pp. (Supplementary to the 1913 Red Book.)*

Nevada.—*Bureau of Industry, Agriculture, and Irrigation. Biennial report, 1913-14. Carson city, 1915. 22 pp.*

Discusses the agricultural development of the State, and reports acreage and value of the most important crops grown.

New York.—*Bureau of Statistics and Information. Statistics of industrial accidents, 1914, prepared by the bureau of statistics and information. [Albany, 1916] 77 pp. (Department of labor. Special bulletin, issued under the direction of the industrial commission. No. 75.)*

This bulletin consists of three parts: (1) Statistics of industrial accidents reported to the department of labor during the year ending September 30, 1914; (2) discussion of the relation of safeguards to accidents in a selected number of cases investigated; (3) discussion of the causes of fatal accidents reported to the department for the five years ending September 30, 1914. The statistics, it is stated, are designed chiefly to throw light on the causes of industrial accidents. An analysis of this bulletin will be found elsewhere in this number of the Review. (See pp. 58 to 62.)

————— *European regulations for prevention of occupational diseases. Prepared by the bureau of statistics and information. [Albany, 1916] 77 pp. (Department of labor. Special bulletin issued under the direction of the industrial commission. No. 76.)*

There are presented in this bulletin a collection of regulations, in force in leading industrial European countries, which are designed to minimize and to protect employees from the dangers of occupational diseases. The collection does not claim to be complete either as to industries or as to countries. The collection includes regulations most recently adopted for a number of industries, each of which is also represented in New York State, and cover five industrial diseases: Poisoning by lead, brass, and mercury; compressed-air illness; and anthrax. The countries included are Great Britain, Germany, France, Austria, and the Netherlands.

————— *New York City. Department of Education. Part-time cooperative and continuation classes. Presented to the board of education Nov. 10, 1915. [New York City, 1915.] 141 pp., folded table. (17th annual report of the city superintendent of schools, 1914-15.)*

On September 16, 1914, the board of education of New York City authorized an experiment in the conduct of continuation cooperative and part-time classes in conjunction with the high schools. This report is a result of that experiment. Some definitions are perhaps necessary. The cooperative system is based on an agreement between a group of manufacturers and a school system whereby the manufacturers agree to institute and carry on a thorough and comprehensive apprentice course in the particular trades, and whereby the school agrees to give both general and specialized instruction to the apprentices. The shop course must be approved by the school authorities, and in most cases the amount of school instruction is made equal to the amount of shopwork. The apprentices are generally divided into sections which alternate with each other so that one section is at the shop while the other is at school. A special teacher, called a coordinator, is employed to coordinate the work of the shop with the instruction in the schools. Under the continuation system the employer releases his employee of school age for a certain period of time each week in order that the latter may continue his academic or mental instruction.

The experiment in question was carried on in 10 high schools during the spring term of 1915 and through August 1, 1915. There were 341 students

enrolled. As a result of the experiment of less than a year the report concludes as follows concerning the cooperative system: (1) Employment will be given to high-school pupils in pairs for alternate periods; (2) industry profits by the arrangement; (3) cooperative schools are applicable in industry, as well as in salesrooms and business offices; (4) suitable programs may be arranged; (5) the supplemental instruction is valuable; (6) the period required for graduation is not necessarily prolonged; (7) the plan provides for completing the students' education; (8) permanent business and industrial positions are opened to students; (9) the interest of the pupils is increased; (10) proper supervision is a valuable feature of the plan.

North Carolina.—*Department of Labor and Printing. Twenty-ninth annual report. Raleigh, 1915. 477 pp.*

Except for a brief introduction, and a classification of industries covering 68 pages, the report is largely statistical, including tables showing the condition of farmers, the trades, miscellaneous factories, cotton, woolen and silk mills, furniture factories, newspapers, and railroads and employees. The highest average wage paid to male laborers on the farms was \$1.06 per day, and to female laborers, 67 cents. The average wage of children under 16 years of age was 37 cents. In the trades, wages showed a slight decrease as compared with 1914, due, it is explained, to a falling off in employment which resulted from the low price of cotton, the influence of which was to stagnate business. Plumbers received the highest average wage, \$4.50, and electric engineers the lowest average wage, \$1.42. The following table shows the number of mill and factory operatives and the total pay roll and estimated yearly output for each specified industry:

NUMBER OF EMPLOYEES, TOTAL PAY ROLL, AND ESTIMATED VALUE OF YEARLY OUTPUT IN EACH SPECIFIED INDUSTRY IN 1915.

Industry.	Number.	Estimated value of yearly output.	Employees.				Pay roll.		
			Wage earners. ¹				Salaried.	Wage earners.	Salaried employees.
			Male.	Per cent.	Female.	Per cent.			
Cordage mills.....	4	\$1,149,306	280	61.0	166	39.0	10	\$192,506	\$9,475
Cotton mills.....	318	84,349,678	31,841	61.8	19,653	38.1	1,137	16,542,121	1,427,539
Furniture factories....	102	10,595,959	5,622	99.6	22	.4	498	1,866,910	472,114
Knitting mills.....	81	11,960,362	2,562	36.3	4,498	63.7	240	2,001,628	248,430
Silk mills.....	4	585,887	230	31.3	506	68.7	2	268,246	1,661
Woolen mills.....	6	750,764	304	60.0	203	40.0	16	198,452	21,430
Other factories.....	3,703	136,036,168	55,568	89.3	6,691	10.7	4,624	23,470,581	5,117,478
Total.....	4,221	245,458,124	96,387	75.2	31,739	24.8	6,437	41,540,444	7,298,127

¹ Including 7,417 persons under 16 years of age. ² Not including 206 wage earners, sex not reported.

The report shows 326 newspapers in the State, employing 1,466 persons, with an aggregate yearly pay roll of \$785,802. The highest average daily wage reported was \$2.51, and the lowest was \$1.09. A railroad mileage of 4,919.57 is reported. The average daily wage paid to railroad employees was \$2.36 received by general office clerks, and the lowest was \$1.10 paid to watchmen and switch tenders.

Pennsylvania.—*Department of Labor and Industry. Safety standards of the industrial board: Boilers. Operative on and after July 1, 1916. [Harrisburg, 1915] 10½ pp. (Vol. I, No. 12.) Consists of the safety standards adopted by the industrial board and outlines the regulations which will be insisted upon by the department in its inspection of boilers.*

Texas.—*State Mine Inspector. Fourth annual report, Austin, 1915. 2½ pp., folded table.*

During the year 1914, 48 mines were in operation. Of these 19 were bituminous coal mines and 28 lignite mines. The average number of days of operation

of the bituminous mines during the year was 222, and of the lignite mines 207 days. The total bituminous tonnage for the year was 1,123,220, and of the lignite coal it was approximately 732,000 tons. The total number of workers in bituminous coal mines was 3,430, of whom 3,180 were employed underground. The total number of workers in the lignite field was approximately 1,300.

The total number of fatal accidents reported during the year was 11, and of nonfatal accidents of a serious nature, 19.

As shown by a diminished output and a decrease in the number of days of operation during the year, there was a considerable industrial depression in the Texas coal fields during the year, explained as due to the competition with oil and gas, the development of which is increasing.

Virginia.—Richmond. *Board of Public Employment Bureau Commissioners. First annual report of the public employment bureau of the city of Richmond, Va., for the year ending December 31, 1915. [Richmond, 1916] 5 pp.*

The report covers the period February 8 to December 31, 1915, during which 1,909 employers filed applications calling for 4,277 persons, and 7,222 persons registered for work, while 4,235 were sent out and 2,179 were known to have been given employment.

The expenses of the bureau amounted to \$3,768.79 for the period February 8 to December 31, 1915.

United States.—Bureau of Foreign and Domestic Commerce (Department of Commerce). *Wholesale prices of leading articles in United States markets, January, 1913, to December, 1915. Washington, 1916. 14 pp.*

——— *Bureau of Mines (Department of the Interior). Accidents at metallurgical works in the United States during the calendar years 1913 and 1914. Washington, 1915. 28 pp. (Technical Paper 124.)*

This paper is the first report of the Bureau of Mines on this subject. It shows that during these two years 119 men were killed, 2,285 seriously injured, and 11,046 slightly injured at smelters and mills, representing rates of 1.56, 29.67, and 143.44, respectively, per 1,000 men employed. In this report a serious injury is one disabling a man and keeping him from duty 20 days or more. The total number of men reported employed in the 390 metallurgical works, both smelters and ore-dressing plants, was in 1913, 35,549, while in 1914 the total number employed in 578 such plants was 41,461. Detailed tables are presented showing the number of fatal, serious, and slight accidents, by States and by causes, at smelters and ore-dressing plants for each year. In the ore-dressing plants machinery was responsible for 25.6 per cent of the fatalities, and in the smelters haulage was responsible for the greatest number of fatalities, 25 per cent. The following table presents a summary of these accidents, by years:

NUMBER OF MEN EMPLOYED, NUMBER OF DAYS WORKED, AND NUMBER OF MEN KILLED AND INJURED IN METALLURGICAL WORKS IN THE UNITED STATES IN THE YEARS 1913 AND 1914.

Year.	Number of employees.	Total days worked.	Average active days.	Killed.		Seriously injured.		Slightly injured.	
				Total.	Per 1,000 employed.	Total.	Per 1,000 employed.	Total.	Per 1,000 employed.
1913.....	35,549	12,139,104	341	63	1.78	1,047	29.45	5,177	145.63
1914.....	41,461	13,787,956	333	56	1.35	1,238	29.86	5,869	141.55
Total...	77,010	25,927,060	336	119	1.56	2,285	29.67	11,046	143.44

United States.—Bureau of Mines (Department of the Interior). Metal mining accidents in the United States during the calendar year 1914. Washington, 1916. 96 pp. (Technical Paper 129.)

This report is largely statistical. It shows that the death rate in the metal mines of the United States (excepting coal mines) in 1914 was slightly less than in any of the three previous years, the fatality rate being 3.54 per 1,000 men employed as against 3.57 per 1,000 in 1913, 3.91 in 1912, and 4.19 in 1911. These reductions from year to year, it is explained, are due largely to the introduction of safety appliances, better supervision, stricter enforcement of rules and regulations, and closer observance of State laws. The following table gives a summary of the accidents occurring in these mines:

NUMBER OF EMPLOYEES, DAYS WORKED, AND ACCIDENTS, SHOWING ACCIDENT RATE PER 1,000 EMPLOYED UNDER EACH SPECIFIED GROUP OF MINES, 1914.

Kind of mine.	Number of active operators.	Employees.			Days' work done.		Killed.		Seriously injured. ¹		Slightly injured. ²	
		Under-ground.	Surface.	Total.	Total.	Average.	Number.	Rate per 1,000 employed.	Number.	Rate per 1,000 employed.	Number.	Rate per 1,000 employed.
Copper.....	585	31,265	13,421	44,686	12,845,058	287	165	3.69	2,037	45.58	11,330	253.55
Gold and miscellaneous metal.....	3,536	35,432	13,006	48,438	13,241,280	273	179	3.70	911	18.81	4,690	96.82
Iron.....	196	24,847	19,960	44,807	11,745,978	262	148	3.30	1,851	41.31	6,922	154.48
Lead and zinc ³	248	7,609	3,326	10,935	2,779,109	254	40	3.66	146	13.35	1,605	146.78
Miscellaneous mineral.....	240	2,465	6,784	9,249	2,177,306	235	27	2.92	128	13.84	596	64.44
Total...	4,805	101,618	56,497	158,115	42,788,731	271	559	3.54	5,073	32.08	25,143	159.02

¹ Involving loss of 20 days or more.

² Involving loss of less than 20 days, but more than 1 day.

³ Mississippi Valley only.

Of all fatalities, 37.56 per cent were due to falls of ore or rock from roof, wall, or bank. Of 361 fatal accidents reported by 258 companies employing 75,453 men, by far the largest death rate per 1,000 employed, 5.76, was in 41 of the mines where the room-and-pillar method of mining prevails, while of 3,899 serious injuries reported by 258 companies, the highest rate per 1,000 employed was 62.89 occurring in 53 of the mines where a caving system is used. A comparison of metal mine, coal mine, and quarry accidents is given, showing that on a 300-day basis the fatality rate per 1,000 300-day workers is, respectively, 3.92, 4.67, and 2.64. The report closes with a brief summary of various State laws relating to reporting of accidents.

————— *How a miner can avoid some dangerous diseases. Washington, 1916. 22 pp. (Miners' Circular 20.)*

One of a series of publications on health and sanitation in the mineral industry, prepared for miners as a result of studies by representatives of the Bureau of Mines and the Bureau of the Public Health Service. It describes briefly the causes and symptoms of some of the more deadly diseases found in mine towns and the means by which these diseases can be largely avoided if not entirely prevented. Emphasis is laid upon proper sanitation, pure water, and pure air. The diseases for which preventive measures are specifically given

are tuberculosis, typhoid fever, smallpox, and pneumonia. The pamphlet concludes:

Sickness is the miner's worst foe, but much of it can be avoided by observance of rules aimed to prevent rather than cure disease. Keep the home and its surroundings clean; keep the privy clean; keep your working place clean; don't spit carelessly; avoid needless exposure; breathe as little dust as possible and you will avoid much sickness and useless suffering to yourself and to others.

United States.—Bureau of Mines (Department of the Interior). *Monthly statement of coal-mine fatalities in the United States. January, 1916. Washington, 1916. 13 pp.*

Report is based upon returns received from State mine inspectors. Comparable data show that in January, 1915, there were 159 fatalities reported, while in 1916 there were 180. During the year 1915 there were 2,226 fatalities as compared with 2,454 during 1914, or a decrease of 8 per cent.

Of the 180 fatalities in January, 1916, 161 occurred underground, 8 in shafts, and 11 on the surface; January, 1915, the numbers were 141 underground, 8 in shafts, and 17 on the surface.

The copy of the report form adopted by the Bureau of Mines for use after January 1, 1916, is appended.

The following statement summarizes the situation for the years 1910 to 1915:

STATISTICS OF COAL PRODUCTION, NUMBER EMPLOYED, AND COAL-MINE FATALITIES IN THE UNITED STATES, 1910 TO 1915.

Year.	Production (short tons).	Number employed.	Number killed.			Production per death (short tons).	Days worked.	Average ton- nage per man.	
			Total.	Per 1,000 em- ployed.	Per 1,000,000 tons mined.			Per year.	Per day.
1910	501,596,378	725,030	2,821	3.89	5.62	177,808	220	692	3.15
1911	496,371,126	728,348	2,656	3.65	5.35	186,887	220	682	3.10
1912	534,466,580	722,662	2,419	3.35	4.53	220,945	225	740	3.29
1913	570,048,125	747,644	2,785	3.73	4.89	204,685	238	762	3.20
1914	513,525,477	763,185	2,454	3.22	4.78	209,261	207	673	3.25
1915 ¹	518,000,000	767,563	2,266	2.95	4.37	228,597	.....	.....	.....

¹ Subject to revision.

— *Congress. House. Committee on Immigration and Naturalization. Restriction of immigration. Hearings before the Committee on Immigration and Naturalization, House of Representatives, Sixty-fourth Congress, first session, on H. R. 558. January 20, 21, 1916. Ten parts. Washington [1916].*

— *Senate. Committee on the Judiciary. Accident compensation to Government employees. Hearing before the subcommittee of the Committee on the Judiciary, United States Senate. February 26, 1916. Washington, 1916. 57 pp. (64th Cong., 1st sess.)*

These hearings relate to a bill (S. 2846) to provide compensation for accidental injuries to employees of the United States resulting in disability or death. The bill is commonly known as the Sutherland bill.

— *Public Health Service (Treasury Department). Health insurance: Its relation to the public health. Prepared under the direction of the Surgeon General. Washington, 1916. 76 pp. (Public Health Bul. No. 76.)*

This bulletin is a presentation of the economic claims and data underlying a system of sickness insurance for wage earners. There have been brought together here in systematic form those facts and figures compiled by official and

private investigators having a bearing on the prevalence and cost of sickness and the conditions causing sickness among wageworkers, such as occupational diseases, irregularity of employment, unhealthful conditions of living, employment of women, inadequate earnings, and poverty. An attempt is made to apportion the responsibility for these conditions as between employer and employee and the general public.

Cooperative action for relief is considered necessary, and analogies are drawn from foreign experiences in dealing with the problem. The plain remedy is held to be some system of State-administered compulsory sickness insurance. On this point the summary and conclusions of the point are as follows:

Health insurance is the most feasible measure, because (a) it is a method by which the cost of sickness is distributed among those responsible for conditions causing sickness and whereby the burden upon the individual is lightened, and (b) it gives a financial incentive for the prevention of sickness to those who are responsible for conditions causing sickness.

Health insurance in its most highly developed form (a) provides for adequate cash and medical benefits to all wage earners in times of sickness; (b) distributes the cost among employers, the public, and wage earners according to their responsibilities; (c) becomes an effective health measure by stimulating the cooperative effort of the three responsible groups and by linking their efforts with those of national, State, and local health agencies; (d) correlates all the forces at work in the prevention of disease, and (e) affords a better basis for the cooperation of the medical profession.

Under an efficient health insurance system a contribution of approximately 50 cents per week per insured person (25 cents by employees, 20 cents by employers, and 5 cents by Government) should enable the insured person to receive: (a) \$7 per week when disabled on account of sickness or nonindustrial accident for a period as long as 26 weeks in one year; (b) adequate medical and surgical care during disability; (c) medical and surgical care of wife of insured person during confinement; (d) a death benefit of \$100. Budgetary studies of large numbers of workingmen's families show that many workers pay as high as 90 cents per week and receive little more than actual funeral expenses.

A governmental system of health insurance can be adapted to American conditions, and when adapted will prove to be a health measure of extraordinary value.

The fact that under such a system the employee has such a large measure of ownership and control will remove all elements of paternalism. The employee will then regard the benefits as rights, not charities.

Adequate medical relief will be placed within the reach of even the lowest-paid worker, and provide for him and his family during sickness.

It will give to those responsible for conditions causing sickness a financial incentive to prevent disease.

Its administration must be closely coordinated with public health agencies if it is to attain the greatest degree of success as a preventive measure.

FOREIGN COUNTRIES.

Australia (Commonwealth).—*Bureau of Census and Statistics.—The Australian Commonwealth, its resources and production, 1915. [Melbourne, 1915.] 112 pp. Illustrated.*

A descriptive yearbook for the Commonwealth, indicating such matters as physical features, history, climate, commerce, finances, and social conditions.

Austria.—*Arbeitsstatistisches Amt. Arbeitszeitverlängerungen (Überstunden) im Jahre 1913 in fabrikmässigen Betrieben Österreichs. Vienna, 1914. 28 pp.*

The Austrian Labor Code fixes the normal hours of labor at 11 per day, but permits overtime in certain instances. The report here listed is one which is annually submitted to parliament by the factory-inspection service, reporting

the amount of permissible overtime worked in 1913. The principal data of the report, with the figures for 1912 in parenthesis, are as follows:

- During the year under review 471 (688) establishments, or 2.8 (3.9) per cent of the 17,034 (16,929) factories existing in 1913 worked overtime (in the meaning of the law). These 471 establishments worked in excess of the 11-hour legal limit in 940 (1,276) instances; in 186 (247) instances (involving not more than 3 days in one month) this was done by merely reporting the proposed overtime work to the industrial authorities, while in 754 (1,029) instances of longer periods of overtime, work permits were obtained from the provincial political authorities. The total hours worked in excess of the legal limit during the year by all workmen affected were 1,891,796 (2,744,341). Of this total the textile industry contributed 680,367 (1,184,268) hours; the stone, earthenware, and glass industries, 261,786 (345,458) hours; and the foodstuff industry, 249,901 (300,431) hours. These data are shown for the year 1913 in four tables: By provinces, by industries, and by provinces and industries combined; and for the 5 years, 1909-1913, by provinces.

Austria.—*Arbeitsstatistisches Amt. Die kollektiven Arbeits- und Lohnverträge in Oesterreich. Abschlüsse und Erneuerungen des Jahres 1912. Vienna, 1914. 358 pp.*

The present report on collective agreements entered into in Austria during 1912 continues a series begun in 1906 by the Austrian bureau of labor statistics. During the year 1912, 822 collective agreements, covering 13,336 establishments and affecting 180,382 workmen, were concluded. Out of this total 298 agreements, affecting 145,228 workmen, were local agreements, while 524, affecting 35,124 workmen, were shop agreements. Of the total agreements concluded during the year, 56 per cent were new agreements and 44 per cent were renewals.

The report states that its data concerning the number of agreements in force during the year are defective because many agreements are broken or terminated by notice before their actual expiration, without this fact being reported to the bureau, and partly because agreements of indeterminate duration, which form about 15 per cent of all agreements in force, were not included in the compilation, as no information could be obtained as to whether or not these agreements were still in force. The data obtained concerning the duration of agreements in force in 1912 have been summarized in the table following:

CLASSIFIED DURATION OF COLLECTIVE AGREEMENTS IN FORCE IN AUSTRIA, 1912.

Duration. ¹	Agreements.	Establishments covered.	Workmen covered.
Less than one year.....	21	41	2,095
One year but not over two.....	159	1,090	10,138
Two years but not over three.....	229	4,695	25,106
Three years but not over four.....	199	2,325	71,843
Four years but not over five.....	52	1,200	27,514
Five years and over.....	29	1,065	9,613
Total.....	689	10,416	146,309

¹ The duration is unreported in 133 cases, covering 2,920 establishments and 34,073 persons.

The following table shows the total number of collective agreements in force, with the number of establishments included and number of employees affected, on December 31, 1912, by industries:

COLLECTIVE AGREEMENTS CLASSIFIED BY INDUSTRIES IN FORCE IN AUSTRIA DECEMBER 31, 1912.

Industry and occupational groups.	Number of agree-ments.	Number of estab-lishments covered.	Number of work-men cov-ered.
Agriculture and gardening.....	2	2	127
Mining.....	2	41	39,200
Stone, earthenware, glass, and china.....	180	901	27,579
Metal working, machinery, apparatus, instruments, and vehicle in- dustries.....	477	3,102	78,154
Woodworking industry.....	170	3,299	24,976
Rubber and celluloid industries.....	1	1	35
Leather industry.....	50	233	3,564
Textile industry.....	53	179	21,868
Upholstering.....	18	627	1,857
Clothing.....	187	17,033	64,743
Paper.....	29	1,093	9,052
Foodstuffs.....	174	2,427	27,538
Hotels, restaurants, cafés, etc.....	9	1,915	5,526
Chemical industry.....	22	22	2,636
Building trades.....	259	6,978	99,655
Printing trades.....	25	1,969	24,000
Commerce, transportation.....	75	2,669	18,973
Engineers and firemen.....	16	46	323
Other occupations.....	17	19	419
Total.....	1,766	42,556	450,225

The principal regulations in agreements entered into in 1912 relate to the hours of labor (81 per cent of all agreements) and to wages (99 per cent). The principal facts in regard to hours and wages as reflected in collective agreements are disclosed in the table following:

NUMBER AND PER CENT OF AGREEMENTS, ESTABLISHMENTS COVERED, AND WORKMEN AFFECTED, CLASSIFIED ACCORDING TO NORMAL HOURS OF LABOR ON THE FIRST FIVE DAYS OF THE WEEK.

Normal hours of labor on the first five days of the week.	Agreements.		Establishments covered.		Workmen covered.		Earlier closing on Saturdays. ¹		
	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	Agree-ments.	Estab-lishments covered.	Work-men covered.
7.....	1	0.2	1	(²)	10	(²)	.....	.....	.....
8.....	4	.6	5	(²)	127	0.1	1	1	16
8½.....	11	1.7	179	1.7	1,182	1.1	7	170	925
8¾.....	6	.9	9	.1	259	.3	1	1	40
9.....	146	22.4	1,961	18.5	40,744	39.5	80	1,245	15,950
9½.....	24	3.7	45	.4	1,538	1.5	21	42	1,237
9¾.....	154	23.8	1,005	9.5	17,239	16.7	134	818	15,300
10.....	49	7.6	135	1.3	3,569	3.5	46	122	3,303
10½.....	201	31.0	2,467	23.3	24,610	23.9	135	550	13,095
10¾.....	2	.3	31	.3	88	.1	1	1	26
10¾.....	19	2.9	2,659	25.1	6,427	6.2	8	28	207
10¾.....	1	.2	8	.1	17	(²)	1	8	17
11.....	22	3.4	1,041	9.8	4,699	4.6	2	17	145
12.....	7	1.1	1,010	9.6	2,179	2.1	1	25	17
13.....	1	.2	31	.3	450	.4	.....	.....	.....
Total.....	648	100.0	10,587	100.0	103,138	100.0	2 438	3,028	50,278

¹ Of the agreements shown here 16, covering 36 establishments and 836 workmen, also provide for earlier closing on Mondays, 1 covering 1 establishment with 39 workmen for earlier closing on Mondays and Tuesdays; 3 agreements covering 10 establishments with 477 workmen provide for earlier closing on Saturdays and longer hours on Fridays; 1 agreement for 9 establishments with 16 workmen provides for earlier closing on Mondays instead of on Saturdays.
² Less than 0.05 per cent.
³ In addition 11 agreements covering 76 establishments and 13,308 workmen provide for earlier closing on Saturdays without regulating the daily hours of labor.

Austria.—*Arbeitsstatistisches Amt. Sitzungsprotokolle des ständigen Arbeitsbeirates, 1913 and 1914. Vienna, 1914, xii, 224 pp.*

Contains the program and minutes of the meetings in 1913 and 1914 of the Austrian permanent advisory labor council. The meeting discussed the following matters: Homework in clothing, shoe, and lingerie industries; insurance of miners; working and wage conditions in the Austrian iron and steel industry; vacations for all workers in industrial establishments; congress on labor legislation in Berne; draft of decree relating to the application of several provisions of the Industrial Code and of the law on factory inspection to specified service conditions regulated in the mercantile employes' law; draft of a law amending articles 79 to 81 of the Industrial Code (workmen's pass books); and day nurseries in factories.

Canada.—*Imperial Yearbook, 1915-16. Second year of publication. Montreal, 1915. 663 pp.*

The widespread approval and circulation, suggests the editor of this yearbook, which were accorded the first edition encouraged the preparation of this edition in which a rearrangement of form, including curtailments and additions due entirely to war, have been made. The aim appears to be to give statistics of Canada and the Empire and to show relations between them. By the presentation of special tables added to the trade and commercial and Imperial sections, an effort has been made to show the existing extent of Canada's trade and "to help the Canadian citizen to gauge the possibilities arising from the cessation of Germany's enormous trade with the Empire and Canada." Thirty-two pages are devoted to a review of the war, followed by such general information about Canada as is usually found in a publication of this kind.

——— *Superintendent of immigration. Report on immigration. Ottawa. 1915. 93 pp. (Department of the Interior, Part II annual report, 1915.)*

The total immigration into Canada for the year ending March 31, 1915, was 144,789, a decrease of 240,089 over the preceding year. Immigration from the United States into Canada fell from 107,530 in the fiscal year 1913-14 to 59,779 in the year 1914-15. Of the 59,779 persons 21,819 were reported as farmers (12,780 males, 4,321 females, and 4,718 children). The report notes that every American State contributed to the immigration to Canada, the largest contributor being Massachusetts, with 9,697.

Denmark.—*Statens Statistiske Departement. Statistiske meddelelser. Fjerde Række, ni og fyrretyvende bind. Copenhagen, 1916. (Danmarks Statistik.)*

The forty-ninth volume of the fourth series of general statistics for Denmark. The report consists of four parts: Cooperative dairies, 1914; Collective agreements between employer and employees in Denmark, August 1, 1915; State taxes on incomes and property, 1915-1916; Agricultural production in 1915.

The following table summarizes the collective agreements in force on August 1, 1915:

COLLECTIVE AGREEMENTS IN FORCE IN DENMARK AUG. 1, 1915.

Occupations.	Agreements in force.	Number of employers.	Number of employees.		
			Males.	Females.	Total.
Laborers (unskilled).....	397	4,268	32,054	3,441	35,495
Woodworkers.....	16	310	1,373	.....	1,373
Butchers.....	42	155	2,667	345	3,012
Bakers.....	44	1,644	2,391	.....	2,391
Brewers and distillers.....	106	75	2,442	1,342	3,784
Carpenters.....	15	1,558	4,075	.....	4,075

COLLECTIVE AGREEMENTS IN FORCE IN DENMARK AUG. 1, 1915—Continued.

Occupations.	Agree- ments in force.	Number of employers.	Number of employees.		
			Males.	Females.	Total.
Firemen, marine.....	17	54	1,840	.....	1,840
Shoemakers.....	7	765	2,758	.....	2,758
Tinsmiths.....	3	660	1,045	.....	1,045
Blacksmiths, sawyers, and machinists.....	49	956	8,709	.....	8,709
Masons.....	21	1,654	6,012	.....	6,012
Seamen.....	29	67	2,538	.....	2,538
Furniture makers.....	10	2,133	4,760	.....	4,760
Millers.....	31	71	537	7	544
Paper makers.....	3	3	743	318	1,061
Painters.....	9	955	3,378	.....	3,378
Saddle makers and upholsterers.....	43	504	1,506	.....	1,506
Tailors.....	7	340	5,810	1,500	7,310
Tobacco workers.....	3	91	2,587	3,312	5,899
Textile workers.....	12	66	1,853	2,383	4,236
Printing, etc.....	3	295	3,412	595	4,007
Other skilled occupations.....	269	(1)	13,099	2,106	15,205
Total.....	1,127	.....	105,589	15,346	120,938

¹ Not reported.

Of the agreements, 70, affecting 1,768 employees, run for less than 1 year; 186, affecting 11,309 employees, 1 year but less than 2 years; 272, affecting 32,350 employees, from 2 to less than 3 years; 195, affecting 19,399 employees, from 3 to less than 4 years; 250, affecting 40,802 employees, from 4 to less than 5 years; and 41, affecting 8,439 employees, for a period exceeding 5 years.

Agreements in 48 cases, affecting 53,800 employees, covered the entire country, but of which 14 are not applicable to the capital; 36, affecting 4,680 employees, a Province or two or more cities; 317, affecting 37,900 employees, a city; and 726, affecting 24,512 employees, an establishment only.

France.—Préfecture de Police. Rapport sur les Opérations du Service d'Inspection des Établissements Classés dans le Département de la Seine, 1914. Paris, 1915. 87 pp.

This volume constitutes the report of the factory inspectors for the district of Paris during the year 1914. The number of classified establishments subject to inspection on December 31, 1914, was 6,659, and of so-called nonclassified establishments 313, making a total of 6,972. The number of inspections made was 12,518.

Great Britain.—Board of Trade. Railway accidents. Summary of accidents and casualties reported to the Board of Trade by the several railway companies during the three months ending 30th September, 1915; reports to the Board of Trade by the inspecting officers of the railway department upon certain accidents which were inquired into. London, 1916. 50 pp.

— **Home Department. Explosions in Mines Committee. Seventh report of the explosions in mines committee, submitting a report on the effects of inhaling dusts applicable for stone dusting in coal mines. London, 1915. 22 pp.**

The explosions in mines committee has already submitted six reports upon the effect of inert dust in preventing or limiting the explosions of coal dust. At the same time that these incombustible dusts were found to be of value in suppressing or limiting coal-dust explosions it was incidentally apparent that they might also give rise to additional danger on their own account, particularly if such dusts contain silica.

This particular investigation on the effects of inhaling dust used in coal mines was conducted by Dr. J. S. Haldane, of Manchester. A summary of his conclusions is as follows:

(1) Both from human experience in coal mines and from experiments on animals there is clear evidence that shale dust, when inhaled, is no more deleterious than coal dust, so that shale dust may be used quite safely for stone dusting in coal mines; (2) flue dust, when inhaled, produces in animals effects which point to the conclusion that it may be unwise to employ it for stone dusting in mines; (3) indications are given as to what varieties of stone-dusting material may be used in mines without detriment to health; (4) it is desirable from the point of view of health to reduce, as far as practicable, the inhalation of any kind of dust in mines.

Great Britain.—*Ministry of munitions. Health of munition workers committee. Memorandum No. 1, Report on Sunday labor; Memorandum No. 2, Welfare supervision; Memorandum No. 3, Report on industrial canteens, London, 1915. 3 pamphlets.*

India (Bombay).—*Factory Department. Annual factory report, 1914. [Bombay], 1915. 8, xxiv pp.*

A report of the factory-inspection service in Bombay Presidency on sanitation, ventilation, wages, employment of women and children, guarding dangerous machinery, and accidents.

There were 777 factories subject to inspection, 71 of which were closed during the entire year. The 706 factories in operation employed 265,975 persons, of which number 206,350 were engaged in the cotton industry.

Netherlands (Amsterdam).—*Bureau van Statistiek. Catalogus van boeken en brochures, en de bibliotheek van het Bureau van statistiek, ten Stadhuiize. Amsterdam, 1915. 22 pp. (Statistische mededeelingen, No. 46.)*

A catalogue of books and pamphlets in the municipal library at Amsterdam on the protection of nursing infants and mothers and on infant mortality.

Norway (Christiania).—*Arbeidskontor. Aarsberetning [Christiania, 1916. 27 pp.] (Norges Offentlige Arbeidsformidling.)*

This pamphlet contains the annual report of the labor exchange of Christiania which functions as a central body for the Kingdom. It is administered by an equi-partisan board representing employers and employees with a State appointed director. During 1915, 41,627 applications for work were filed with it, 35,231 vacancies, reported 30,994 applicants given work, and 31,078 situations filled. This represents an increase over 1914 of 17 per cent in the number of applicants for work, of 23.7 per cent in the number of vacancies reported, and 26 per cent in the number of situations filled. Classified by sex, there was an increase in all items except as respects the woman's division.

————— *Statistiske kontor. Husholdningsregnskaper fort av endel mindre bemidlede familier i Kristiania, Bergen, Trondhjem, Drammen, Kristianssand og Hamar i aaret 1912-13. Utgit ved Kristiania kommunes statistiske kontor. Christiania, 1915. LXXIX, (1). 179 pp. (Special Unkersøkelser, 4.)*

This volume presents the results of an inquiry into the cost of living in six principal cities in Norway, based on 174 family budget books kept for one year (1912-13) under the supervision of the city authorities. The tables in general present the results of a study of the budgets of 171 families, having a range from 1,186.06 crowns (\$317.86) to 3,795.92 crowns (\$1,017.31) for the year, while special study is made of the three families having an income in excess of 4,000 crowns (\$1,072).

The largest single proportion of families, or 25.3 per cent, was found in income group 1,750 to 2,000 crowns (\$469 to \$536) ; 23.6 per cent, 2,000 to 2,500 crowns (\$536 to \$670) ; 20.7 per cent, 1,500 to 1,750 crowns (\$402 to \$469) ; 14.9 per cent, 1,200 to 1,500 crowns (\$322 to \$402) ; 7.5 per cent, 3,000 to 4,000 crowns (\$804 to \$1,072) ; and 1.7 per cent, over 4,000 crowns (\$1,072). The average income for all 171 families was 2,021 crowns (\$542).

As to occupation of 168 heads of families, 65 per cent were ordinary workmen, 35 per cent commercial and office employees, and three worked on their own account. The average size of the 171 families was 5.23 persons for those having incomes ranging from 1,200 to 4,000 crowns (\$322 to \$1,072), and 6.33 persons for the three with incomes exceeding 4,000 crowns (\$1,072) annually. It is noticeable that in general there was a gradual increase in the size of the family as the income increased up to 3,000 crowns (\$804), the maximum, or 6.45 persons per family, being found in the income group 2,500 to 3,000 crowns (\$670 to \$804), with a decline to 6.31 per family in the next highest income group of 3,000 to 4,000 crowns (\$804 to \$1,072).

NUMBER OF FAMILIES BY CLASSIFIED INCOME.

	From 1,200 to 4,000 crowns (\$321.60 to \$1,072).						Over 4,000 crowns (\$1,072).	Total.
	1,200 to 1,500 crowns (\$321.60 to \$402).	1,500 to 1,750 crowns (\$402 to \$469).	1,750 to 2,000 crowns (\$469 to \$536).	2,000 to 2,500 crowns (\$536 to \$670).	2,500 to 3,000 crowns (\$670 to \$804).	3,000 to 4,000 crowns (\$804 to \$1,072).		
Number of families.....	26	36	44	41	11	13	171	3
Average number of persons per family.....	4.58	4.97	5.18	5.27	6.45	6.31	5.23	6.33
								(1)

1 Not reported.

The sources of income of the different income classes for the 171 households having an income under 4,000 crowns (\$1,072) and for the three having an income in excess of that amount are set forth in the first table following, while the distribution of the expenditures is shown in the second statement.

SOURCES OF INCOME OF FAMILIES, BY CLASSIFIED INCOME.

Sources of income.	Amount of income of families having an income of—					Per cent of earnings from each source of families having an income of—				
	\$321.60 to \$1,072 (171 families).	\$321.60 to \$469.	\$469 to \$670.	\$670 to \$1,072.	\$1,072 to \$1,608 (3 families).	\$321.60 to \$1,072 (171 families).	\$321.60 to \$469.	\$469 to \$670.	\$670 to \$1,072.	\$1,072 to \$1,608 (3 families).
Total income.....	\$541.53	\$423.25	\$553.67	\$804.14	\$1,235.87	100.00	100.00	100.00	100.00	100.00
Earnings of—	489.97	398.87	499.13	692.89	1,148.32	90.48	94.24	90.14	86.17	92.92
Husband, wages.....	443.55	369.92	456.93	586.36	808.61	81.91	87.40	85.52	72.92	65.43
Husband, other than wages.....	16.30	12.61	14.91	30.77	201.89	3.01	2.98	2.69	3.83	16.34
Wife.....	10.89	13.17	8.03	15.10	.....	2.01	3.11	1.45	1.88	.....
Children.....	19.23	3.17	19.25	60.66	137.82	3.55	.75	3.48	7.54	11.15
Lodgings and boarders...	21.10	11.59	22.69	40.04	.....	3.90	2.74	4.10	4.98	.....
Insurance.....	2.94	2.60	3.09	3.30	.....	.54	.61	.56	.41	.....
Gifts, etc.....	7.53	5.36	5.84	19.12	34.55	1.39	1.27	1.06	2.38	2.80
Other.....	19.99	4.83	22.92	48.79	53.00	3.69	1.14	4.14	6.06	4.28

AVERAGE EXPENDITURE PER FAMILY, FOR VARIOUS ITEMS.

Items of expenditure.	Average expenditure per family, having an expenditure of—					Per cent of total expenditure for each item of expenditure per family having an expenditure of—				
	\$321.60 to \$1,072 (171 families).	\$321.60 to \$469.	\$469 to \$670.	\$670 to \$1,072.	\$1,072 to \$1,608 (3 families).	\$321.60 to \$1,072 (171 families).	\$321.60 to \$469.	\$469 to \$670.	\$670 to \$1,072.	\$1,072 to \$1,608 (3 families).
Food.....	\$234.76	\$196.41	\$238.60	\$320.26	\$403.89	44.13	47.95	43.97	39.44	31.49
Beverages and tobacco.....	10.45	8.37	11.47	12.15	25.50	1.96	2.05	2.12	1.50	1.99
Clothing.....	77.06	51.83	82.59	122.60	174.25	14.48	12.66	15.23	15.10	13.59
Rent.....	85.57	64.12	89.62	126.61	218.43	16.08	15.65	16.52	15.59	17.03
Heat and light.....	26.80	22.04	27.10	38.07	58.11	5.03	5.38	5.00	4.68	4.53
Laundry.....	9.31	6.49	9.12	17.29	22.80	1.75	1.58	1.68	2.14	1.78
Furniture.....	10.35	8.14	10.30	16.23	107.28	1.94	1.99	1.90	1.99	8.37
Medicine and medical treatment.....	6.71	4.57	5.04	18.15	31.45	1.26	1.11	.93	2.23	2.45
Servants.....	1.89	.44	1.78	6.03	35.22	.36	.11	.33	.74	2.75
Society dues, and insurance premiums.....	23.16	18.68	19.81	43.58	54.03	4.35	4.56	3.65	5.74	4.21
Taxes.....	8.67	5.42	8.73	16.89	45.09	1.64	1.32	1.61	2.08	3.52
Gifts, etc.....	5.67	4.49	5.44	9.51	13.13	1.07	1.10	1.00	1.16	1.02
Education, etc.....	9.01	5.49	8.56	19.71	29.12	1.69	1.34	1.58	2.43	2.27
Amusements.....	4.50	2.98	4.81	7.32	14.14	.84	.73	.89	.90	1.10
Lottery tickets.....	1.63	.90	1.79	2.98	4.96	.31	.22	.33	.37	.39
Travel.....	11.96	6.78	12.81	22.33	31.47	2.24	1.65	2.36	2.75	2.45
Other expenses.....	4.62	2.43	4.86	9.41	13.59	.87	.60	.90	1.16	1.06
Total.....	532.12	409.51	542.45	812.13	1,282.45	100.00	100.00	100.00	100.00	100.00

Nova Scotia.—*Department of Public Works and Mines. Annual report of the mines, 1915. Halifax, 1916. 181 pp.*

Report of the production of minerals in the Province for the fiscal year ending September 30, 1915: Equipment, working conditions, and development in the collieries; Regulations for installing and operating electricity in the mines. Tables are given showing the number of accidents in mines. The report includes brick kilns and quarrying.

The average daily force employed in the coal mines of Nova Scotia for the year ending September 30, 1915, was 16,626, and the total number of days worked by this force during the year was 3,310,934.

Victoria (Australia).—*Chief Inspector of Factories. Report of the chief inspector of factories, Melbourne, on antistrike legislation in operation throughout the Australasian States; and recommendations regarding such legislation for Victoria. Melbourne, 1915. 30 pp.*

This document consists principally of a digest of the various laws on strikes and on the settlement of industrial disputes in the various States of the Commonwealth of Australia. It briefly describes the results obtained by such legislation.

As applicable to the State of Victoria, it is recommended that the system of wage boards in that State be extended; that the determinations of the wage board be automatically suspended upon the occurrence of a strike; that legislation be enacted requiring notice of intention to strike or lockout; that any determination of a strike should be preceded by a secret ballot on the question, such a vote to be carried by a majority of the voters on the rolls of the wage board; that 7 days' notice be given to an employer preceding the declaration of a strike; that penalties be automatic and become a charge on the property, earnings, and wages of the parties concerned until recovered; and, finally, that the prerogative of the Crown to pardon offenders or remit fines be abrogated.

PERIODICAL PUBLICATIONS RELATING TO LABOR.

LABOR DEPARTMENTS AND BUREAUS.

Austria.—*Soziale Rundschau, herausgegeben vom K. K. Arbeitsstatistischen Amt im Handelsministerium. Vienna.*

October–November, 1915.—General labor legislation: Norway, law, September 19, 1915, relating to the protection of workmen in industrial establishments; Austria, Decrees of the minister of commerce, of September 11 and October 21, 1915, relating to night and overtime work of women and juvenile workers; Industrial inspection in Austria, 1914. Special labor legislation: Spain, proposed prohibition of nightwork in bakeries; France, law of July 10, 1915, regulating the wages of female home workers in the clothing industry; Norway, proposed regulation of home work; Austria, Imperial decree, October 3, 1915, extending the term of office of officers of mine guilds. Labor disputes: Norway, law, August 6, 1915, relating to labor disputes; Sweden, statistics of labor disputes, 1914. Employment bureaus and unemployment: Austria, measures for the employment of war invalids; Measures for the aid of unemployed salaried workers; Statistics of employment offices, July and August, 1915; Unemployment in Austrian trade unions, June–September, 1915; Germany, compulsory reporting by free employment offices; Bulgaria, unemployment during 1914. Labor offices: Activities of the Austrian bureau of labor statistics, 1914. Workmen's insurance: Germany, Insurance of salaried employees during the war; Extension of the Prussian miners' funds war law to Austro-Hungarian citizens; Netherlands, introduction of compulsory sickness insurance. Social measures: Austria, Decree, October 21, 1915, regulating the cultivation of fallow lands; Decree, September 29, 1915, prohibiting the use of potatoes and restricting the use of sugar beets in the manufacture of spirits; Decree, October 30, 1915, regulating the sale of legumes; Extension of furloughs for engineers and firemen employed in operating agricultural machinery; Financial aid by the Government to dependents of men called in for army service, to invalid enlisted men and their dependents, and to survivors of enlisted men fallen in the war; Denmark, investigation into the social consequences of the war; Review of social and economic literature.

Brazil. *SÃO PAULO (State).*—*Boletim do Departamento Estadual do Trabalho. São Paulo.*

Vol. 4, No. 15. (2d quarter, 1915).—Accidents to employees in industrial, commercial, and transportation establishments and enterprises in São Paulo, Brazil, in 1914; Proposed labor contract law, Italy, March 18, 1915; Proceedings of the seven conventions of the International Association for Labor Legislation; Proposed law on industrial accidents; Safety and hygienic regulations for manufacturing establishments, and for operations in which poisonous substances are employed; Immigration to America, 1904–1913; Eight-hour day and nightwork; Colonization of North Paulista; Portuguese legislation (hours of labor in commercial and industrial establishments, and employment of women and minors); Detailed statistics of accidents in the State capital; Prices of necessities; Wages on coffee plantations; Immigration, 1915; Immigrants provided for by the State; Labor exchange, Department of Labor; Publications received.

Denmark.—*Statistiske Efterretninger udgivet af det Statistiske Department. Copenhagen.*

March 6, 1916 (Vol. 8, No. 4).—Production and sale of sugar in Denmark, 1915; Exports of dairy products; Imports of hides and skins, 1915; Imports of lumber from coniferous trees; Growth of the Danish merchant marine; The

index numbers of the Economist; Population of Denmark, February, 1916, and other brief notices.

France.—*Bulletin du Ministère du Travail et de la Prévoyance Sociale. Paris.*

November–December, 1915. (Vol. 22, Nos. 11 and 12.)—Social movement—France: Inquiry concerning industrial and social activities October, 1915; Mine labor, October and November, 1915; Strikes in November and December, 1915; Work of the mixed commissions in the departments for the securing of employment; Unemployment relief, 1913; Operations of the national unemployment fund for Paris; Central employment exchange; British inquiry on conditions of labor in munition factories in France; Determination of the average wage of agricultural laborers for purposes of accident compensation; Appointment of a central wage board for home workers; Savings banks, 1912, 1913; Economic situation expressed in index number, third quarter 1915. Foreign countries: Cost of living since the outbreak of the war; Reports on labor and labor conditions, Germany, Spain, United States, Great Britain, Italy, Norway, the Netherlands, Switzerland. Miscellaneous reports: Wholesale prices, Paris, November–December, 1915. Foreign commerce of France, 1914, 1915; Railroad receipts, August and October; Production of sugar and alcohol. Court decisions, legislative reports, laws, official documents, etc.

Germany.—*Reichs-Arbeitsblatt, herausgegeben vom Kaiserlichen Statistischen Amte, Abteilung für Arbeiterstatistik. Berlin.*

February, 1916.—Labor market in Germany, January, 1916; Labor market in foreign countries (Great Britain, Switzerland, New York, Canada); Employment in January, 1916, according to reports of industrial establishments and sick funds; Unemployment in German trade unions, January, 1916; Unemployment in foreign countries (Sweden, third quarter, 1915; Denmark, September and October, 1915; Netherlands, November, 1915). Labor market from the middle of January to the middle of February, 1916, according to reports of public employment offices; New form for the compulsory monthly reports of public employment offices; Activities of public employment offices, January, 1916; War measures of the maritime trade accident insurance association; Labor shortage, wage increases, and high cost of living in Great Britain during the year 1915; Wage statistics of the Leipzig local sick fund; Universal old-age pensions in Sweden; Prussian regulations of December 16, 1915, for the compulsory monthly reporting of public employment offices to the Imperial statistical office; Statistical tables of the labor market.

Great Britain.—*Board of Trade Labor Gazette. London.*

March, 1916.—Employment chart; The labor market; Special articles on employment of women; Employment in Germany; Retail food prices in the United Kingdom, Berlin, and Australia; Rise in the cost of living in Copenhagen; New Norwegian factory act; Reports on employment in the principal industries; Labor in the British dominions over-sea and foreign countries—Canada, Australia, Holland, Denmark, Austria-Hungary, Norway, United States; Board of Trade labor exchanges. Statistical tables: Trade disputes; Changes in rates of wages; Prices of wheat, flour, and bread; Diseases of occupations; Distress committees; Fatal industrial accidents; Unemployment insurance; Pauperism; Foreign trade; Cooperative wholesale societies. Legal cases, official notices, etc.

Italy.—*Bollettino dell'Ufficio del Lavoro, Ministero di Agricoltura, Industria e Commercio. Rome. (Semimonthly.)*

March 1, 1916.—Labor market by localities and industries; Labor disputes, January and first half of February, 1916; Retail prices (actual and relative)

of foodstuffs in Italian cities, first six months 1914 and January, 1916; Retail prices of foodstuffs in foreign countries; Great Britain (July, 1914, and February 1, 1916); Germany, Berlin (July, 1914, and December, 1915); Austria, Vienna (July, 1914, and December, 1915); Switzerland (June, 1914, September and December, 1915); Employers' and employees' associations; Congresses and conventions; Activities of the bureau of labor; Decree, February 3, 1916, postponing the election of new members of the superior labor council; The more common diseases among cultivators of hemp; Court decisions relating to labor.

March 16, 1916.—Labor market by localities and industries; Labor disputes, second half of February; Employers' and employees' associations; Congresses and conventions; Interpellation in Parliament as to the employment of war prisoners; Activities of the labor office; Meeting of the permanent labor council, March 2 and 3, 1916; Decree, February 24, 1916, extending agricultural contracts; Decree, February 27, 1916, making provision for the expediting of public works during the war; Decree, February 28, 1916, providing that during the war the national insurance fund shall credit workmen called into the army with the minimum premiums prescribed by law; Decree, March 11, 1916, regulating the prices of domestic grain; Decree, March 11, 1916, regulating the milling of grain; Cases of poisoning by trinitrotoluol; Provisions for the protection of employees of public carriers; Court decisions relating to labor.

Netherlands.—*Maandschrift van het Centraal Bureau voor de Statistiek. The Hague.*

January, 1916.—Review of industrial and social progress, 1915; Labor market, 1915; Dock labor and employment of interned soldiers, January, 1916; Unemployment and unemployment insurance, 1915, and December, 1915; Labor exchanges, December, 1915; Strikes and lockouts, 1914 and December, 1915; Minimum wages and maximum hours on Government work, January, 1916; Collective agreements, 1915; Trade union activity; Wholesale and retail prices, 1915, January, 1916; Immigration and emigration, December, 1915; Decisions of courts; Miscellaneous labor and industrial statistics; Principal war measures in the Netherlands and foreign countries; Reports from foreign countries on the labor market, strikes and lockouts, labor exchanges, prices, etc.; Statistical tables on the labor market, labor exchanges, prices, unemployment, unemployment insurance, building activities, occupational diseases, State finances; Laws, decrees, etc.

New York.—*The Bulletin Issued Monthly by the New York State Industrial Commission. Albany.*

March, 1916, (vol. 1, No. 6).—"New Rule No. 2" (equipment of factory buildings with fire escapes, etc.); Report on anthrax February 26, 1916; Decisions of the commission; Insurance in the State fund; Fire-alarm hearing; The labor market; Factory inspection; Reports of the bureaus.

Pennsylvania.—*Monthly Bulletin of the Pennsylvania Department of Labor and Industry. Harrisburg.*

February, 1916, (vol. 3, No. 2).—Hazards to health from industrial dust; "Petromortis," a new disease; State regulation of bake shops; Benzol poisoning; Hints for safety and health; Timely hints for foundrymen, bakers, machinists; Hazards of gas works; State and national cooperation for study of unhealthful conditions in industry; Obligation to obey orders of fire inspectors; Inclines as stairways for greater safety in public schools, factories, and halls; Work of the bureau of employment; Women in Pennsylvania industries; Aid of Bryn Mawr alumnae in reducing fire hazards for women workers;

Cooperation of department in Americanization of immigrants; Immigrant statistics; Compilation of statistics of public-service corporations; Financial statistics of the bureau of statistics and information; Bureau of workmen's compensation; Hearings on tentative rules relating to construction, maintenance, and operation of cereal mills, malt houses, and grain elevators.

Spain.—*Boletín del Instituto de Reformas Sociales. Publicación Mensual. Madrid.*

February, 1916.—Report of the secretary's office and of the special divisions; Accident statistics, 1914; Social conditions in the rice-growing sections in the province of Valencia; Strike and lockout statistics; Cost of living for laborers; Cheap houses; Unemployment; Savings; Legislation and decrees: Proposed law in France relative to the cultivation of lands unused as a result of the war; Proposed eight-hour law in Uruguay; Amendatory war measures of social import adopted by Germany.

Sweden.—*Sociala Meddelanden utgivna av K. Socialstyrelsen. Stockholm.*

No. 1, 1916.—Hours of labor in barber and hairdressing establishments; Labor movement in the merchant marine; Conditions in Denmark arising from the war; Restriction of the sale of spirituous liquors; Work of the labor-inspection service, 1914; Pension bureau, 1914; Recent protective labor legislation in Norway; State subsidies to asylums for inebriates; Instructions for treatment of inebriates; Approval of an asylum for treatment of inebriates; Regulations relating to the bolting of rye flour; Reduction of rates on transportation of wood; Reports of labor inspectors concerning fatal industrial accidents; Registration of sick funds under the new law; Brief notices; Marine ordinances; Public contracts; Sickness and unemployment insurance committee; Benefit funds in Denmark, 1914; Labor market in England, December, 1915; Labor market in Germany, December, 1915; Swedish emigration, 1915; Cooperative union; Cooperation (wholesale) in foreign countries; Housing in Gottenborg, activities of the commune in an effort to provide dwellings in Gottenborg; Regulating house rents in Norway; Inquiry relative to uniform rates of wages in the bureau of State railways, in the postal, telegraph, and customs service, and in the water-power bureau; Municipal measures taken in Denmark relative to high prices; Public labor exchanges in Sweden, December, 1915; Flour and bread prices, 1915; Review of prices of articles of consumption in Sweden, fourth quarter, 1915; Food prices in Sweden, 1904–December, 1915; Food prices in various localities, Sweden, fourth quarter, 1915; Prices of cattle, Sweden, 1914–December, 1915; Prices of cattle, Sweden, fourth quarter, 1915; Prices of fish, Stockholm, December, 1914–December, 1915.

MISCELLANEOUS.

Austria.—*Amtliche Nachrichten des k. k. Ministeriums des Innern betreffend die Unfall-und Krankenversicherung der Arbeiter. Vienna.*

February, 1916.—Accident insurance; Elections and appointments of officers of the workmen's accident insurance institutes and courts of arbitration; Joint decree, January 24, 1916, of the ministers of the interior and of public works relating to the premium tariff of the miners' accident insurance institute; Decisions of the administrative court relating to workmen's accident insurance; Decisions of courts of arbitration. Sickness insurance; New determination of the customary local wages for the territory of Prague; Decisions of the administrative court relating to workmen's sickness insurance.

Germany.—*Amtliche Nachrichten des Reichsversicherungsamts. Berlin.* (Monthly.)

January 15, 1916.—Accident insurance: Financial statistics of the carriers of accident insurance for the year 1914. Sickness, invalidity, and survivors' insurance. Business and financial statistics for the year 1914 of the insurance institutes and special institutes established in pursuance of the Imperial Insurance Code.

Germany.—*Vierteljahrshefte zur Statistik des Deutschen Reichs, herausgegeben vom Kaiserlichen Statistischen Amte. Berlin.*

Fourth quarter, 1915 (vol. 24, No. 4).—Distribution of crop areas, forests, waste lands, etc. Hop crop for 1915. Bankruptcy statistics, third quarter, 1915. Tobacco culture, 1915. Changes in the number and capital of German stock companies. Bankruptcy statistics for the year 1914. Strikes and lock-outs, third quarter, 1915. Price statistics: Live-stock prices in 10 German cities, third quarter, 1911–1915. Cattle and hog prices in 5 German cities, January to September, 1908–1915. Live-stock prices in foreign countries, third quarter, 1911–1915. Meat prices in Berlin, 1910–1914. Retail prices of legumes in 24 German cities 1895–1914. Prices of food stuffs in Strassburg, in Alsace, 1910–1914. Charts.

Italy.—*Bollettino della Emigrazione, Commissariato della Emigrazione. Rome.* (Monthly.)

January, 1916.—Living and working conditions in French coal-mining districts. Law, December 19, 1914, regulating the immigration and naturalization of aliens in the Republic of Panama. Changes in the staff of the commission. Decree, December 23, 1915, regulating expatriation for the purpose of securing work.

February, 1916.—Statistics of the Italian trans-Atlantic emigration for 1914 and 1915, and the supervisory activities of the emigration commission. Living and working conditions in French coal-mining districts (continued). Discussions in the House of Deputies, December, 1915, relating to emigration and labor. Monthly statistics of trans-Atlantic emigration, January, 1916. Changes in the staff of the commission. Decree, January 2, 1916, relating to the issuance of passports to nonresident Italians.

Italy.—*Bollettino dell' Ispettorato dell' Industria e del Lavoro. Ministero di Agricoltura, Industria e Commercio, Ufficio del Lavoro. Rome.* (Bimonthly.)

September–October, 1915.—Personnel of the inspection service; Activities of the inspectors during September and October, 1915; Administrative orders; Production, imports, and exports of raw and partly worked up wool with special reference to the actual needs of Italian wool-combing establishments; Inspection work in rice fields during the polishing season of 1915.

Spain.—*Boletín del Consejo Superior de Emigración. Madrid.*

November, 1915.—Report of the conditions among Spanish emigrants in the States of Para and Amazonas, and upon the Madeira-Mamore Railroad; Royal decree and regulations of the commission on emigration; Prevention of trachoma; Operations of the emigration commission; Emigration statistics; Spanish cooperative associations in Cuba; Current notes; Bibliographic notes.

December, 1915.—Report of conditions among Spanish emigrants in the States of Para and Amazonas, and upon the Madeira-Mamore Railroad, continued; Report of the finance bureau; Operations of the emigration commission; Rulings of the commission; Emigration statistics; Current notes; Bibliographic notices; and index for Vol. VII.

PERIODICAL PUBLICATIONS RELATING TO LABOR.

LABOR DEPARTMENTS AND BUREAUS.

Australia.—*Commonwealth Bureau of Census and Statistics. Labor and Industrial Branch. Labor bulletin (published quarterly). Melbourne.*

July–September, 1915 (No. 11).—Industrial conditions; Unemployment; Retail prices, house rents, and cost of living; Wholesale prices; Industrial disputes; Changes in rates of wages; Current rate of wages; Operations under arbitration and wages board acts; Assisted immigrants; State free employment bureaus; Industrial accidents; Preference to unionists; Reports of departments and bureaus; Imperial and foreign publications. Appendix—Minimum rate of wages.

Canada.—*The Labor Gazette issued by the Department of Labor by order of Parliament. Ottawa.*

February, 1916.—Notes on current matters of industrial interest. Industrial and labor conditions, 1916: General summary; Reports of local correspondents; Reports of women correspondents. Proceedings under the industrial disputes investigation act, 1907; Annual convention of the British Columbia federation of labor; Review of trade disputes, 1915; Changes in rates of wages and hours of labor, fourth quarter, 1915; Wholesale and retail prices, January, 1916; Reports of employment bureaus; Fair wages schedules in Government contracts, January, 1916; Trade disputes, January, 1916; Industrial accidents, January, 1916; Immigration, emigration, colonization; Building permits, January, 1916; Reviews; Recent legal decisions affecting labor.

Chile.—*Boletín de la Oficina del Trabajo. Santiago de Chile. Biennial.*

Second half, 1914 (vol. 4, No. 9).—Labor conditions in the saltpeter district of Iquique; Activities of the labor exchanges; Workmen's dwellings; Cost of living; Compensation for accidents; Industrial statistics; Accident statistics, 1914; Accident insurance in France and Austria and its applicability to Chile; Proposed legislation and social movement in Chile and in foreign countries; Distributive cooperative societies in various countries.

Denmark.—*Statistiske Efterretninger udgivet af det Statistiske Department. Copenhagen.*

February 5, 1916 (vol. 8, No. 2).—Government prices of grain, 1915; Crop production, 1915; Dairying in Denmark; Unemployment, November, 1915; Index number of the Economist.

February 25, 1916 (vol. 8, No. 3).—Population of Denmark, February 1, 1916; Increase in prices since the outbreak of the war; Retail prices, February, 1916; Unemployment, December, 1915.

Great Britain.—*The Board of Trade Labor Gazette. London.*

February, 1916.—Employment chart; The labor market; Organization of women's work on the land; Special articles on retail food prices in the United Kingdom, Berlin, Vienna, Italy, and Switzerland; Employment in Germany in December; The war and employment in France; Employment of women in munition factories; Hours of work in munition factories; Land settlement for sailors and soldiers; Work of the Board of Trade labor exchanges in 1915; Reports on employment in the principal industries; Labor in foreign countries—Holland, Norway, Sweden, Italy, United States; Board of Trade labor exchanges. Statistical tables: Trade disputes; Changes in rates of wages; Farm servants' wages in Scotland; Sliding scale changes in wages; Prices of wheat, flour, and bread; Pauperism; Unemployment insurance; Diseases of occupations; Fatal industrial accidents; Foreign trade; Distress committees; Passenger movement to and from the United Kingdom. Legal cases, official notices, etc.

PERIODICAL PUBLICATIONS RELATING TO LABOR.

LABOR DEPARTMENTS AND BUREAUS.

Australia.—*Commonwealth Bureau of Census and Statistics. Labor and Industrial Branch. Labor bulletin (published quarterly). Melbourne.*

July–September, 1915 (No. 11).—Industrial conditions; Unemployment; Retail prices, house rents, and cost of living; Wholesale prices; Industrial disputes; Changes in rates of wages; Current rate of wages; Operations under arbitration and wages board acts; Assisted immigrants; State free employment bureaus; Industrial accidents; Preference to unionists; Reports of departments and bureaus; Imperial and foreign publications. Appendix—Minimum rate of wages.

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February, 1916.—Notes on current matters of industrial interest. Industrial and labor conditions, 1916: General summary; Reports of local correspondents; Reports of women correspondents. Proceedings under the industrial disputes investigation act, 1907; Annual convention of the British Columbia federation of labor; Review of trade disputes, 1915; Changes in rates of wages and hours of labor, fourth quarter, 1915; Wholesale and retail prices, January, 1916; Reports of employment bureaus; Fair wages schedules in Government contracts, January, 1916; Trade disputes, January, 1916; Industrial accidents, January, 1916; Immigration, emigration, colonization; Building permits, January, 1916; Reviews; Recent legal decisions affecting labor.

Chile.—*Boletín de la Oficina del Trabajo. Santiago de Chile. Biennial.*

Second half, 1914 (vol. 4, No. 9).—Labor conditions in the saltpeter district of Iquique; Activities of the labor exchanges; Workmen's dwellings; Cost of living; Compensation for accidents; Industrial statistics; Accident statistics, 1914; Accident insurance in France and Austria and its applicability to Chile; Proposed legislation and social movement in Chile and in foreign countries; Distributive cooperative societies in various countries.

Denmark.—*Statistiske Efterretninger udgivet af det Statistiske Department. Copenhagen.*

February 5, 1916 (vol. 8, No. 2).—Government prices of grain, 1915; Crop production, 1915; Dairying in Denmark; Unemployment, November, 1915; Index number of the Economist.

February 25, 1916 (vol. 8, No. 3).—Population of Denmark, February 1, 1916; Increase in prices since the outbreak of the war; Retail prices, February, 1916; Unemployment, December, 1915.

Great Britain.—*The Board of Trade Labor Gazette. London.*

February, 1916.—Employment chart; The labor market; Organization of women's work on the land; Special articles on retail food prices in the United Kingdom, Berlin, Vienna, Italy, and Switzerland; Employment in Germany in December; The war and employment in France; Employment of women in munition factories; Hours of work in munition factories; Land settlement for sailors and soldiers; Work of the Board of Trade labor exchanges in 1915; Reports on employment in the principal industries; Labor in foreign countries—Holland, Norway, Sweden, Italy, United States; Board of Trade labor exchanges. Statistical tables: Trade disputes; Changes in rates of wages; Farm servants' wages in Scotland; Sliding scale changes in wages; Prices of wheat, flour, and bread; Pauperism; Unemployment insurance; Diseases of occupations; Fatal industrial accidents; Foreign trade; Distress committees; Passenger movement to and from the United Kingdom. Legal cases, official notices, etc.

Italy.—*Bollettino dell' Ufficio del Lavoro. Ministero di Agricoltura, Industria e Commercio. Rome. (Semimonthly.)*

February 1, 1916.—Labor market, by localities and industries; Labor disputes, December, 1915, and first half of January, 1916; Employers' and employees' associations; Congresses and conventions; Retail prices and index numbers of foodstuffs in Italy, December, 1915; Retail prices and index numbers of foodstuffs in Italian cities, first six months, 1914, and December, 1915; Retail prices of foodstuffs in foreign countries—Germany, Berlin (increase in November, 1915, over July, 1914); Austria, Vienna (increase in October, 1915, over July, 1914); Activities of the Labor Office.

February 16, 1916.—Labor market by localities and industries; Labor disputes, second half of January, 1916; Housing of workmen, second quarter, 1915; Employers' and employees' associations; Congresses and conventions; Activities of the Bureau of Labor; Disinfection of hides and skins infected with anthrax germs; Insurance against occupational diseases in Canada; Court decisions relating to labor.

New York.—*The Bulletin issued monthly by the New York State Industrial Commission. Albany.*

February, 1916 (vol. 1, No. 5).—Amended "rule No. 2," requiring the inclosure of stairways in buildings five stories or less in height; Recent variations granted; Commissions' decisions; The labor market; Inspections to date; Bureau activities; The State fund, etc.

New Zealand.—*Journal of the Department of Labor. Wellington.*

January, 1916.—Conditions of employment and trade, December, 1915; Reports of the women's employment branches; Reports of unions; Recent legal decisions; Scaffolding inspection act; Cases under the workers' compensation act; Statistics of persons placed in employment, cooperative works, accidents, trade-unions, current retail prices; Control of prices and supplies in Germany.

Norway.—*Sociale Meddelelser utgit av Socialavdelingen under Departementet for Sociale Saker, Handel, Industri og Fiskeri. Christiania.*

No. 6, 1915 (printed 1916).—Labor market October to December, 1915; Retail prices (actual and relative), fourth quarter 1915, 1911 to 1915; Consumption of beers, wines, and whiskies, etc., 1910 to 1914; Proposed law on accident insurance in Sweden; Swedish universal pension system.

Pennsylvania.—*Monthly Bulletin of the Pennsylvania Department of Labor and Industry. Harrisburg.*

December, 1915.—Popular appeals to safeguard workers; Timely hints to employers and employees; State-wide efforts to prevent fatalities and property loss by fire; Slogans for safety; Protecting workers from poisonous dust; Self-oiling bearings as factors for safety; Keep the wash rooms clean; The State bureau of employment; New form of accident reports; New production report; Workmen's compensation bureau; Rulings of the State workmen's compensation board; Underwriting compensation insurance; Ladders must be built according to regulations; Safety standards for ladders.

Spain.—*Boletin del Instituto de Reformas Sociales. Publicacion Mensual. Madrid.*

January, 1916.—Report of the secretary's office and of the special divisions; Labor disputes and cost of living; Social progress; Legislation, including decree establishing board of postal savings and decree prohibiting deductions by employers from wages for medical treatment; Judicial decisions of courts; Strikes and lockouts; The war and employment in France; Means of securing an adequate supply in Great Britain of articles of prime necessity and raw materials.

MISCELLANEOUS.

Austria.—*Amtliche Nachrichten des k. k. Ministeriums des Innern betreffend die Unfallversicherung und die Krankenversicherung der Arbeiter. Vienna.*

January, 1916.—Pension insurance of salaried employees: Decree, December 17, 1915, of the minister of the interior providing for extension of the waiting period. Accident insurance: Joint decree, December 30, 1915, of the ministers of the interior and of public works relating to the premium tariff of the miners' accident insurance institute; Determination of the risk classes of the miners' accident insurance institute, in force January 1, 1915, to December 31, 1917, approved by ministerial decree December 30, 1915; Principles governing the determination of the premium tariff and risk classes of the miners' accident insurance institute.

Germany.—*Amtliche Nachrichten des Reichsversicherungsamts. Berlin. (Monthly.)*

December 20, 1915.—General part: Order, October 15, 1915, of the imperial chancellor providing for annual reports of the insurance offices and superior insurance offices; Notification, December 16, 1915, of the imperial insurance office as to the election and appointment of nonpermanent alternate members of the imperial insurance office. Accident insurance: Order, November 24, 1915, of the imperial insurance office as to extension of the present risk tariff of the accident insurance association of transfer, cab, etc., companies; Decisions on appeals, other decisions. Sickness, invalidity, and survivors' insurance: Decisions of the decision senates; Disbursements of the invalidity insurance institutes, October, 1915, for pensions and benefits to insured persons and their survivors; Receipts from the sale of contribution stamps, November, 1915.

Italy.—*Bollettino dell' Emigrazione. Ministero degli Affari Esteri, Commissariato dell' Emigrazione. Rome. (Monthly.)*

October-December, 1915 (consolidated issue).—Minutes of the meetings of the council of emigration; Appendix: Report of the commissioner general on the supervision of emigration at ports of departure; Prohibition of the admission of illiterate aliens to the United States; Proposed construction of an emigrant station in Naples; Changes in the personnel of the commission of emigration.



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THE LONGSHOREMAN.¹

The lack of public interest in the longshoreman, reflected in the dearth of literature and current mention, led to a study of this industry in 1912 by Charles B. Barnes, director of the New York City public employment bureau, who has given the results of his investigation in a volume issued in 1915 by the Russell Sage Foundation. The study was concentrated upon conditions in Manhattan, Brooklyn, and Hoboken, and its aim was to give a picture of the men, of the conditions of labor which affect them, of the relations existing between them and their employers and bosses, and of their own efforts to improve their lot in life.

It is estimated, in the absence of accurate figures, that in 1914 there were 35,000 longshoremen in the port of New York City. Since practically all of them are casual or intermittent workers, the necessity and social value of an extensive study of the occupation seemed apparent.

It is estimated that as late as 1880, 95 per cent of the longshoremen in both foreign and coastwise commerce were Irish and Irish-Americans, the remaining 5 per cent being Germans, English, and Scandinavians. At the time of the investigation Irishmen had been superseded largely by Italians, who made up about two-thirds of the total. Many Polaks, Jews, and Negroes have also taken the place of the Irishmen. This shifting of races has been a factor in bringing about what the author characterizes as a "deterioration in efficiency among longshoremen of the port," but he adds that "the readiness of foremen and stevedores to engage a poorer grade of labor, and the general lack of consideration on the part of the employers for the safety and well-being of their employees, must not be disregarded as contributing causes."

The author takes occasion to correct what he believes to be a general impression—that these workers are industrial outcasts, shiftless drunkards, and unworthy of serious attention personally and socially, as well as industrially. A distinction is drawn between the "regular" longshoreman and the "shenango," who does the odd work

¹ The Longshoreman, by Charles B. Barnes. New York Survey Associates, Inc., 1915. 287 pp. Illustrated.

on lighters and barges and who is characterized as the parasite of the trade. It was found that the majority of the regular longshoremen are sturdy, well-built, muscular men; that they are shy but independent, and hate toadyism; that nine-tenths of them are supporters of families; that they are ashamed to be known as longshoremen because of the unsavory reputation the trade has gained; that they are honest, as a rule; have little appreciation of the value of money; are gregariously inclined; and lack thrift. Drunkenness is prevalent but seems to be diminishing. They have few opportunities for advancement. An effort has been made to provide shelter for them while waiting for opportunity to work, but it has resulted in the establishment of only one longshoremen's rest, which was opened on June 15, 1910. During the year 1914 a daily average of 424 people visited the shelter. Up to the date of the report no other provision had been made to shelter these men, and the author concludes that "the facts seem to show that some suitable provision should be made if only in the interest of better citizenship."

Shipping in the port of New York City falls into three divisions—(1) foreign commerce, (2) coastwise trade, and (3) local trade—and it is estimated that three-fourths of the longshoremen are working on vessels which sail to foreign ports. Every phase of the work of longshoremen is described in minute detail, emphasis being given to the lack of standardization of the work and the irregularity of employment. The essential differences between foreign commerce and coastwise and local trade are suggested. Special mention is made of the banana trade, which is a "branch of foreign commerce so different fundamentally from all other types of work which pass under that head that it requires separate treatment." The author concludes, from his detailed analysis of the work performed by the "pier" men, the "deck" men, and the "hold" men, that "longshore work can by no means be classed as unskilled labor."

As a rule longshoremen are hired by the steamship companies themselves, although many are given work by contracting stevedores. The men are engaged either by individuals and gangs or by hundreds. If by the first method, selection may be made by the foreman because of some previous knowledge of them or because they look strong and capable, and they are then given numbered checks of brass to keep until the work is done. By the latter method these brass checks are issued indiscriminately and the men are selected in groups of 100 or less. Those holding the lowest numbers are the first selected and are thus always assured of employment.

It is stated that the rate of pay for longshoremen in foreign commerce has varied many times during the past 50 years, and there has never been complete uniformity throughout the port. Before the

Civil War they were paid \$1.50 per day of 10 hours. Later the rate was raised to 25 cents per hour, then to 30 cents, then to 33 cents, and finally to 40 cents per hour. In 1872 they were paid 80 cents per hour for nightwork and \$1 per hour for Sunday work, the day rate remaining at 40 cents. This schedule was reduced in 1874 and the men went on strike, but lost. Thirty cents per hour for daywork and 45 cents for nightwork and Sunday work was then paid. Later the men were paid extra for work during the meal hour. These frequent fluctuations in wage rates have characterized the industry. On September 2, 1912, the present schedule was arranged—33 cents per hour for daywork, 50 cents for nightwork and on holidays, and 60 cents on Sundays, Christmas, July 4, and for work during mealtime. Foremen are generally paid by the day or week, the usual weekly wage being about \$24. In the coastwise trade the prevailing wage is 30 cents per hour for daywork, 30 to 45 cents for nightwork, and 35 to 50 cents for Sunday work. There is little opportunity for deductions for fines, although instances are given where such have occurred. Some cases of graft among foremen are mentioned. It is stated that earnings of men who work in the local traffic are even more precarious and difficult to estimate than those of the foreign commerce or coastwise men because their work is still more haphazard. Records kept by some of the longshoremen indicate that—

The work is uncertain for even the best men. Stability of income is therefore impossible. In the case of four exceptional men who kept wage records average weekly earnings ranged from \$10.57 to \$21.78, and in order to attain the higher average the men were obliged to work much at night. There is absolutely no way of knowing the average earnings of the less regularly employed.

Men familiar with longshore work estimate the average yearly earnings of longshoremen at from \$520 to \$624 a year. Other men of equal experience place this average considerably lower—at less than \$500.

There is no guaranty of permanency of employment when obtained; it depends entirely upon the time the ship docks and the urgency of immediate discharge or loading of cargo. Often the men work through the meal hour, at night, and on Sundays and holidays, and it was found that these long stretches are exceedingly exhausting, resulting in increased risk of accidents and liability to disease due to physical depletion. Men are discharged without notice whenever a job is finished, or turned off for an hour or two without pay when a delay in the work occurs. This irregularity of employment is illustrated by the diary record of a certain longshoreman which shows that on 298 days out of 602, or nearly one-half (49.5 per cent), he did no work. Assuming that the longshoreman, like any other workman, should normally rest one day in seven, his abnormal unemployment would be represented by 298 days minus 86 days, or 212

days, which is only 35.2 per cent of the total of 602 days. Moreover, on 73 of the 304 days when he was at work his time was five hours or less. Yet there were 53 days on which he worked from 13 to 22 hours, and on four of these days his work continued more than 20 hours. There were 15 weeks (not consecutive) in which there was lack of employment throughout the entire week.

The demoralizing effect of this irregularity of employment is emphasized. Hanging about the piers in the hope of obtaining work—and being frequently turned away without securing it—has given the longshoreman the reputation for loafing and shiftlessness and has tended directly to encourage irregular habits and drinking and to discourage thrift. The maladjustment of available labor along the water front, due to lack of cooperation among employers, works to the disadvantage of the men, meaning for many unemployment or chronic underemployment. It was developed that the greatest evil of this work is its casual or intermittent character, which, if it cannot be entirely eradicated, should be minimized. How dock labor has been largely decasualized in Europe is described in great detail in appendixes giving the results achieved, particularly in London and Liverpool.

Numerous disputes have arisen between these workers and the steamship companies, but only three strikes of any consequence have occurred—in 1874, 1887, and 1907. In each case the matter of wages was the chief grievance, the strike being caused by a rejection on the part of the companies of definite demands by the men or being called as a protest by the men against reductions in rates of wages initiated by the companies.

The great strikes left in their wake decreased vitality, dissensions, or utter ruin. After the strike of 1887 the unions entirely died out and it was 10 years before they were again organized. The result of the strike of 1907 was the division of the unions into two separate bodies with all the evil that attends such division. The loss of the first two strikes resulted in a decrease of wages, while after the strike of 1907 the wages remained the same. Whenever an advance in wages has been secured it has been the result of a demand presented with calm determination to the companies. In some cases the companies seeing the justice of the demand have acceded; at other times they have been forced to yield by the united resolution of the men to hinder the work in all possible ways until they won their point. Thus, quiet persistence and not the strike has been the road to success.

Longshoremen's unions have existed since the middle of the last century. They have had an active and stormy history. But the slight advantages won after the strikes have usually been lost again. The unions have never been strong enough to exact their demands from the employers, nor have they been sufficiently united in spirit and purpose to maintain any consistent policy. Poor judgment, stubbornness, dishonesty among the leaders, jealousies, antagonisms among the men and between locals have prevented any effective use of the power at their disposal.

In the author's opinion it is probable that there is no other heavy physical work which is accompanied with so much overtime and such long stretches of toil without interruption as the work of the longshoreman.

Efforts to secure definite information as to accidents were almost a failure, but data were obtained concerning 309 authentic cases. Of these 96 were fatal and 213 nonfatal. The exact places where the accidents happened were ascertained in 191 cases and indicated that the work in the hold entails greater risk by far than that in any other position. "Yet it must be remembered that although the majority of accidents are reported as occurring in the hold, it is not always the hold men who are hurt. The deck men may be thrown down the hatchway. It is questionable whether they or the hold men are the most exposed of the entire hatch gang."

Of the nonfatal injuries it is stated that "there is practically no part of the human frame that is not in danger of fracture, laceration, or contusion." The leg and the foot were most often hurt. The loss of time varied from a few weeks to several months, with five cases in which the men were laid off two years or more. The average age of those whose ages were learned was 39 years, and of the 153 men whose conjugal condition was ascertained, two-thirds were married. In 65 fatal accidents the circumstances of which were ascertained, not one was found to be due to the carelessness of the victim himself. Three were attributed to the carelessness of fellow workmen, 30 were classed as due to defective equipment or faulty methods, and 32 resulted from sudden dangers which could not be foreseen by the men, "which goes far to prove the extrahazardous nature of the occupation." Of the 97 nonfatal accidents studied, at least 56 were preventable, it is stated, and only 4 of these were due to carelessness of the person injured.

The difficulty of discovering the compensation paid to dependents when a longshoreman is killed at work is alluded to. In the 96 fatal cases compensation ranging from \$400 to \$1,000 was awarded in five instances. In 27 cases, almost 30 per cent, it is stated that there is evidence that no damages were paid, and in 64 cases it was impossible to learn whether or not payment had been made. In nonfatal cases it was found that indemnity ranging from a wooden leg to \$1,000 was given in 20 cases. In several instances amounts ranging from \$25 to \$75 were paid for fractures or other injuries when the victim through no fault of his own had lost from one to four months' time. The author points out that the workers themselves are quick to respond to calls for help for fellow workers and the collections which have been taken ranged in amount from \$40 to \$78.

In Europe, where more definite and accurate information is available, in the ratings of the English and Continental insurance companies water-front work heads the list or is a close second among all the hazardous occupations.

The British statistics showing mortality in 105 occupation groups from specific causes other than accidents indicate that during the period 1900-1902 the deaths among dock and wharf laborers in a standard population of 71,005 were 632 from phthisis, pneumonia, and bronchitis combined, or a decrease of 34.1 per cent over the period 1890-1892. The mortality among these laborers was greater than that of any other occupation group dealt with, being in the latter period more than twice that of coal miners and only slightly less than twice that of stone and slate quarriers, and bricklayers, masons, and builders.

In view of excessive mortality among longshoremen, the author points out that this country "has the unenviable reputation of being practically the only nation with a large foreign commerce which has absolutely no regulations for the protection of men engaged in longshore work"; and to illustrate the extent to which safety regulations have been adopted in certain foreign ports the full text of the British statutory rules and orders of 1904, and the revised accident prevention regulations of the accident insurance association of the stevedoring industry for 1905 governing the work in British ports, and the regulations for prevention of accidents issued by the harbor inspection department of Hamburg are presented in the appendixes. The author is strong in his suggestion that radical changes are necessary in order to secure protection to workmen in the New York City port. Some improvements are noted, but they have been improvements in machinery and "have tended chiefly toward increased efficiency so that the work may be done with greater rapidity and on a larger scale." Emphasis is placed on the necessity for the proper inspection of gear and machinery, and the installation of proper safeguards, and the prohibition of careless habits of work.

Based on the results achieved in European ports and other ports of this country where public interest has been aroused, the author sees possibilities for bettering the condition of these workmen. In Europe the great attainment of employers has been the decasualization of labor by the establishment of preference classes and by pooling of labor over a large area, thus reducing to a minimum the irregularity of employment. How this has been done is described in the appendixes. It is pointed out in the report and elaborated in an appendix that in efficiency and organization Hamburg is pre-eminent, but its "system under which contract laborers are employed is arbitrary and oppressive."

What has been done can be done again. England and Germany have blazed a trail which is of immense service in pointing the direction our own progress should take. This direction is toward increased good will, greater cooperation of supposed conflicting interests, an enlarged sense of legislative responsibility, and a more farseeing application of the principle of efficiency throughout all phases of the industry of the port.

CONCILIATION WORK OF THE DEPARTMENT OF LABOR, MARCH 16 TO APRIL 15, 1916.

On the authority contained in the organic act of the department to mediate in labor disputes and to appoint commissioners of conciliation in its discretion, the Secretary of Labor, through the commissioners of conciliation, exercised his good offices in eight labor disputes between March 16 and April 15, 1916.

The companies involved in the eight controversies, the number of employees affected, and the results secured, as far as available, are shown in the following statement:

NUMBER OF LABOR DISPUTES HANDLED BY THE DEPARTMENT OF LABOR THROUGH ITS COMMISSIONERS OF CONCILIATION, MAR. 16 TO APR. 15, 1916.

Name.	Workmen affected.		Result.
	Directly.	Indirectly.	
Haynes Automobile Co., Kokomo, Ind.—lockout.....	25	1,075	Adjusted.
Grand Central Terminal Co., New York—controversy.....			Pending.
Texas & Pacific Ry. Co. and clerks—controversy.....	700	8,000	Do.
Pullman Car Cleaners—strike.....	800		Adjusted.
Anderson Drop Forge Co., Detroit, Mich.—strike of machinists.....			Pending.
Hancock Knitting Mills, Philadelphia—strike.....			Do.
Cramp Ship Building Yards, Philadelphia—strike of boiler makers and ship builders.....	1,500		Do.
Chicago & Alton R. R. and its maintenance of way employees—controversy.....			Do.

There has been an adjustment in the following cases which were noted as pending in the statement submitted March 15, 1916, and published in last month's REVIEW:

Controversy, New York, New Haven & Hartford Railroad and its mechanical forces.

Strike of machinists, Edwards Valve Co., East Chicago, Ind.

New York, Ontario & Western Railway, Middletown, N. Y.

FEDERAL EMPLOYMENT WORK OF THE DEPARTMENT OF LABOR.

During March, 1916, the Division of Information of the Department of Labor placed 7,030 persons in employment as compared

with 4,185 during February, 1916. As there were 19,484 applications for work, 36.08 per cent were therefore placed, as compared with 29.35 per cent for February. The operations of the division by months since May, 1915, when fuller reports began to be made, are contained in the following statement:

OPERATIONS OF THE DIVISION OF INFORMATION, BUREAU OF IMMIGRATION, DURING THE MONTHS OF MAY, 1915, TO MARCH, 1916.

Month.	Number of applications for help.	Number of persons applied for.	Number of applicants for places.	Number referred to employment.	Number actually employed.	Per cent of applicants placed.
1915.						
May.....	638	3,826	12,132	3,752	3,495	28.81
June.....	1,249	3,601	14,530	5,131	4,646	31.98
July.....	1,160	8,665	18,061	6,369	6,035	33.41
August.....	1,279	7,931	17,827	7,321	6,757	37.90
September.....	1,201	4,551	13,334	5,671	5,405	40.54
October.....	1,104	5,423	12,215	5,460	5,006	40.98
November.....	847	4,650	11,908	4,459	4,146	34.82
December.....	698	3,588	11,902	2,622	2,170	18.23
1916.						
January.....	933	5,063	15,015	4,300	3,419	22.78
February.....	1,423	6,413	14,257	5,036	4,185	29.35
March.....	3,443	10,209	19,484	8,113	7,030	36.08

The following statement of the employment work of the 18 separate zones of operation covering the whole country gives the usual details for February and March, 1916:

SUMMARY OF ACTIVITIES FOR THE MONTHS OF FEBRUARY AND MARCH, 1916.

Zone.	Opportunities received.				Applications for employment.					
	Applications for help.		Persons applied for.		Applications received.		Referred to employment.		Number actually employed.	
	February.	March.	February.	March.	February.	March.	February.	March.	February.	March.
1. Boston, Mass.....	1	2	1	50	26	73	.....	10	.....	6
Portland, Me.....										
Total.....	1	2	1	50	26	73	.....	10	.....	6
2. New York, N. Y.....	106	157	1,189	789	1,122	1,229	500	785	363	637
Buffalo, N. Y.....	50	60	1,787	791	855	811	638	703	498	600
Total.....	156	217	2,976	1,580	1,977	2,040	1,138	1,488	861	1,237
3. Philadelphia, Pa.....	93	113	117	1,371	412	413	227	384	166	230
Pittsburgh, Pa.....	8	30	18	176	508	774	206	319	88	148
Total.....	101	143	135	1,547	920	1,187	433	703	254	378
4. Baltimore, Md.....	24	15	47	17	233	158	173	137	173	137
5. Norfolk, Va.....	25	20	29	215	95	104	18	25	22	59
6. Jacksonville, Fla.....		2		6	9	16	.....	1	.....
Charleston, S. C.....	5	3	40	226	74	52	58	54	56	28
Miami, Fla.....	16	8	25	16	98	98	21	18	13	7
Mobile, Ala.....	1		1		7	6	.....	.....	.....
Savannah, Ga.....	5	3	374	30	72	37	44	30	30	20
Total.....	27	16	440	278	260	209	123	103	99	55

SUMMARY OF ACTIVITIES FOR THE MONTHS OF FEBRUARY AND MARCH, 1916—Contd.

Zone.	Opportunities received.				Applications for employment.					
	Applications for help.		Persons applied for.		Applications received.		Referred to employment.		Number actually employed.	
	February.	March.	February.	March.	February.	March.	February.	March.	February.	March.
7. New Orleans, La.....	3	3	3	5	96	214	20	17	1	2
Gulfport, Miss.....	1	3	1	3	47	64	.....	3	.....	.....
Memphis, Tenn.....	2	1	22	20	38	23	1	2	1	2
Total.....	6	7	26	28	181	301	21	22	2	4
8. Galveston, Tex.....	6	3	13	9	70	64	19	13	11	8
Amarillo, Tex.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....
Eagle Pass, Tex.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Albuquerque, N. Mex.....	.....	.....	.....	.....	8	.....	.....	.....	.....	.....
Houston, Tex.....	8	1	10	1	155	78	5	.....	5	.....
Laredo, Tex.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
San Angelo, Tex.....	.....	1	.....	1	.....	5	.....	1	.....	.....
Total.....	14	5	23	11	234	148	24	14	16	8
9. Cleveland, Ohio.....	33	90	365	100	197	113	124	88	42	34
10. Chicago, Ill.....	95	138	156	952	2,503	6,152	850	950	840	924
Detroit, Mich.....	64	158	147	523	137	376	82	288	79	288
Indianapolis, Ind.....	33	51	235	225	309	257	250	247	250	247
Saulte Ste. Marie, Mich.....	7	5	54	33	45	64	35	46	34	42
Total.....	199	352	592	1,733	2,994	6,849	1,217	1,531	1,203	1,501
11. Minneapolis, Minn.....	103	156	114	164	63	162	31	69	29	69
12. St. Louis, Mo.....	13	29	31	610	237	227	29	61	23	49
Kansas City, Mo.....	41	61	93	125	493	591	45	203	40	97
Total.....	54	90	124	735	730	818	74	264	63	146
13. Denver, Colo.....	15	12	17	15	126	70	50	40	11	7
Salt Lake City, Utah.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....	15	12	17	15	126	70	50	40	11	7
14. Helena, Mont.....	2	3	5	4	18	11	11	7	1	.....
Moscow, Idaho.....	2	.....	2	.....	.....	.....	5	.....	2	.....
Total.....	4	3	7	4	18	11	16	7	3	.....
15. Seattle, Wash.....	26	72	40	120	322	512	29	110	28	101
Aberdeen, Wash.....	10	33	41	98	175	230	41	98	41	98
Bellingham, Wash.....	9	26	11	63	94	179	9	59	8	50
Everett, Wash.....	5	15	8	21	25	53	8	21	8	16
North Yakima, Wash.....	122	352	168	563	487	980	165	542	164	512
Spokane, Wash.....	57	81	65	110	137	139	38	100	38	97
Takoma, Wash.....	53	162	111	465	538	1,421	110	465	109	465
Walla Walla, Wash.....	58	138	77	235	308	343	64	180	60	179
Total.....	340	879	521	1,675	2,086	3,857	464	1,575	456	1,518
16. Portland, Oreg.....	8	946	13	1,043	126	783	8	910	8	906
17. San Francisco, Cal.....	174	216	215	281	2,180	1,286	308	305	184	248
Fresno, Cal.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....	174	216	215	281	2,180	1,286	308	305	184	248
18. Los Angeles, Cal.....	1	1	1	2	540	557	1	1	1	1
Bakersfield, Cal.....	1	.....	5	.....	29	3	5	.....	5	.....
San Diego, Cal.....	136	273	761	731	1,241	753	808	821	753	716
Tucson, Ariz.....	1	.....	1	.....	1	2	.....	.....	.....	.....
Total.....	139	274	768	733	1,811	1,315	814	822	759	717
Total for month.....	1,423	3,443	6,413	10,209	14,257	19,484	5,036	8,113	4,185	7,030

WORK OF STATE AND MUNICIPAL EMPLOYMENT BUREAUS.

In continuation of the publication of data relative to the operations of free public employment offices, begun in the January, 1916, issue of the *Review*, the following table is presented. In this table, information is given for State employment bureaus in 11 States, municipal employment bureaus in 8 States, State-city employment bureaus in 2 States, and a city-private employment bureau in 1 State. Data are given for February, 1915, and February, 1916, from bureaus not included in the April issue of the *Review*, but which have furnished such information since the publication of that number. Figures for March, 1916, are given for all bureaus that have reported those data, and figures for March, 1915, are also presented for comparative purposes in cases where reports for that month have been received.

OPERATIONS OF PUBLIC EMPLOYMENT OFFICES, FEBRUARY AND MARCH, 1915 AND 1916.

State and city.	Applica- tions from employ- ers.	Persons asked for by employ- ers.	Number of—		Persons referred to posi- tions.	Posi- tions filled.
			Persons applying for work.			
			New registra- tions.	Re- newals.		
<i>California (municipal).</i>						
Berkeley:						
March, 1915.....	271	306	197	705	306	306
March, 1916.....	240	259	104	554	259	239
Los Angeles ¹ : March, 1916.....	(²)	7,366	1,972	(²)	7,468	6,879
Sacramento:						
March, 1915.....	170	(²)	113	(²)	313	313
March, 1916.....	182	(²)	82	(²)	312	312
<i>Colorado (State).</i>						
Colorado Springs:						
March, 1915.....	(²)	322	(²)	(²)	(²)	304
March, 1916.....	(²)	552	681	(²)	509	(²)
Denver No. 1:						
March, 1915.....	(²)	104	(²)	(²)	(²)	164
March, 1916.....	(²)	196	214	(²)	146	(²)
Denver No. 2:						
March, 1915.....	(²)	217	(²)	(²)	(²)	217
March, 1916.....	(²)	269	446	(²)	233	(²)
Pueblo:						
March, 1915.....	(²)	51	(²)	(²)	(²)	49
March, 1916.....	(²)	243	253	(²)	223	(²)
<i>Connecticut (State).</i>						
Bridgeport:						
February, 1915.....	169	(²)	(²)	(²)	(²)	155
February, 1916.....	383	(²)	(²)	(²)	(²)	335
March, 1915.....	233	(²)	(²)	(²)	(²)	207
March, 1916.....	541	(²)	(²)	(²)	(²)	482
Hartford:						
February, 1915.....	181	(²)	(²)	(²)	(²)	162
February, 1916.....	550	(²)	(²)	(²)	(²)	469
March, 1915.....	210	(²)	(²)	(²)	(²)	166
March, 1916.....	562	(²)	(²)	(²)	(²)	427
New Haven:						
February, 1915.....	146	(²)	(²)	(²)	(²)	119
February, 1916.....	451	(²)	(²)	(²)	(²)	325
March, 1915.....	180	(²)	(²)	(²)	(²)	133
March, 1916.....	510	(²)	(²)	(²)	(²)	403
Norwich:						
February, 1915.....	32	(²)	(²)	(²)	(²)	27
February, 1916.....	161	(²)	(²)	(²)	(²)	156
March, 1915.....	40	(²)	(²)	(²)	(²)	32
March, 1916.....	213	(²)	(²)	(²)	(²)	201

¹ State-city.² Not reported.³ Not reported for males.

OPERATIONS OF PUBLIC EMPLOYMENT OFFICES, FEBRUARY AND MARCH, 1915
AND 1916—Continued.

State and city.	Number of—					Positions filled.
	Applications from employers.	Persons asked for by employers.	Persons applying for work.		Persons referred to positions.	
			New registrations.	Re-novels.		
<i>Connecticut (State)—Concluded.</i>						
Waterbury:						
February, 1915.....	123	(1)	(1)	(1)	(1)	93
February, 1916.....	179	(1)	(1)	(1)	(1)	92
March, 1915.....	175	(1)	(1)	(1)	(1)	143
March, 1916.....	202	(1)	(1)	(1)	(1)	110
<i>Georgia (municipal).</i>						
Atlanta: March, 1916.....	99	113	214	130	125	79
<i>Illinois (municipal).</i>						
Chicago: March, 1916.....	1 67	1, 624	350	(1)	1, 624	912
<i>Indiana (State).</i>						
Evansville:						
March, 1915.....	(1)	125	1 289	(1)	1 32	122
March, 1916.....	(1)	178	1 268	(1)	184	159
Fort Wayne:						
March, 1915.....	(1)	132	1 348	(1)	148	127
March, 1916.....	(1)	301	1 290	(1)	273	259
Indianapolis:						
March, 1915.....	(1)	154	1 367	(1)	160	152
March, 1916.....	(1)	356	1 425	(1)	367	338
South Bend:						
March, 1915.....	(1)	174	1 587	(1)	182	172
March, 1916.....	(1)	430	1 482	(1)	344	322
Terre Haute:						
March, 1915.....	(1)	245	1 397	(1)	242	228
March, 1916.....	(1)	(1)	(1)	(1)	(1)	(1)
<i>Kansas (State).</i>						
Topeka:						
March, 1915.....	10	10	58	5	10	7
March, 1916.....	21	21	86	6	16	16
<i>Kentucky (city-private).</i>						
Louisville: March, 1916.....	(1)	174	331	713	183	88
<i>Massachusetts (State).</i>						
Boston:						
March, 1915.....	1, 179	1, 350	1 770	(1)	1 2, 367	1, 134
March, 1916.....	1, 984	2, 341	1 1, 419	(1)	1 3, 955	1, 701
Fall River:						
March, 1915.....	120	132	1 29	(1)	1 114	100
March, 1916.....	127	143	1 38	(1)	1 133	110
Springfield:						
March, 1915.....	688	724	1 246	(1)	1 882	547
March, 1916.....	786	962	1 334	(1)	1 1, 133	727
Worcester:						
March, 1915.....	477	562	1 565	(1)	1 834	379
March, 1916.....	956	1, 191	1 703	(1)	1 1, 483	735
<i>Michigan (State).</i>						
Detroit:						
March, 1915.....	(1)	(1)	(1)	(1)	(1)	2, 064
March, 1916.....	5, 733	6, 000	(1)	(1)	5, 849	5, 189
Kalamazoo:						
March, 1915.....	(1)	(1)	(1)	(1)	(1)	250
March, 1916.....	550	620	1 600	(1)	(1)	406
Saginaw: March, 1916.....	670	670	1 640	(1)	640	640
<i>Minnesota (State).</i>						
Duluth:						
March, 1915.....	(1)	(1)	(1)	(1)	(1)	408
March, 1916.....	(1)	(1)	(1)	(1)	(1)	650
Minneapolis:						
March, 1915.....	(1)	(1)	(1)	(1)	(1)	1, 156
March, 1916.....	(1)	(1)	(1)	(1)	(1)	1, 251
St. Paul:						
March, 1915.....	(1)	(1)	(1)	(1)	(1)	571
March, 1916.....	(1)	(1)	(1)	(1)	(1)	708

1 Not reported.

2 Number of requisitions.

3 Number applying for work.

4 Number who were registered.

5 Number of offers of positions.

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OPERATIONS OF PUBLIC EMPLOYMENT OFFICES, FEBRUARY AND MARCH, 1915 AND 1916—Continued.

State and city.	Number of—					Positions filled.
	Applications from employers.	Persons asked for by employers.	Persons applying for work.		Persons referred to positions.	
			New registrations.	Re-novels.		
<i>Montana (municipal).</i>						
Butte:						
March, 1915.....	(1)	(1)	2 359	(1)	146	130
March, 1916.....	(1)	(1)	2 660	(1)	(1)	357
<i>New York (municipal).</i>						
New York City:						
March, 1915 ²	360	1, 168	2, 645	(1)	1, 233	402
March, 1916 ⁴	2, 279	2, 502	2, 316	(1)	2, 761	1, 926
<i>Ohio (State-city).</i>						
Akron: March, 1916.....	(1)	1, 789	586	1, 445	1, 360	1, 110
Cincinnati:						
March, 1915.....	(1)	1, 009	1, 387	6, 676	1, 066	761
March, 1916.....	(1)	2, 286	1, 790	4, 130	2, 020	1, 356
Cleveland:						
March, 1915.....	(1)	3, 832	3, 265	12, 711	3, 715	3, 273
March, 1916.....	(1)	7, 209	1, 984	7, 819	5, 151	4, 377
Columbus:						
March, 1915.....	(1)	1, 947	758	4, 695	1, 989	1, 751
March, 1916.....	(1)	2, 223	900	2, 601	2, 128	1, 604
Dayton:						
March, 1915.....	(1)	525	465	1, 908	548	396
March, 1916.....	(1)	1, 235	518	1, 214	1, 013	845
Toledo:						
March, 1915.....	(1)	771	1, 115	2, 749	709	672
March, 1916.....	(1)	3, 008	1, 227	2, 267	2, 414	1, 999
Youngstown: March, 1916.....	(1)	1, 115	816	1, 191	1, 170	908
<i>Oklahoma (State).</i>						
Enid:						
March, 1915.....	47	(1)	2 112	(1)	(1)	51
March, 1916.....	239	(1)	2 265	(1)	(1)	237
Muskogee:						
March, 1915.....	83	(1)	2 118	(1)	(1)	69
March, 1916.....	254	(1)	2 187	(1)	(1)	150
Oklahoma City:						
March, 1915.....	222	(1)	2 462	(1)	(1)	211
March, 1916.....	267	(1)	2 271	(1)	(1)	220
Tulsa:						
March, 1915.....	(1)	(1)	(1)	(1)	(1)	(1)
March, 1916.....	362	(1)	2 324	(1)	(1)	320
<i>Pennsylvania (State).</i>						
Harrisburg: March, 1916.....	(1)	320	316	118	336	221
Johnstown: March, 1916.....	(1)	264	82	17	66	42
Philadelphia: March, 1916.....	(1)	647	761	350	589	391
Pittsburgh: March, 1916.....	(1)	2, 959	1, 170	37	708	668
<i>Rhode Island (State).</i>						
Providence:						
March, 1915.....	396	691	578	133	(1)	691
March, 1916.....	258	268	196	150	(1)	268
<i>Texas (municipal).</i>						
Dallas:						
March, 1915.....	70	84	153	20	93	84
March, 1916.....	188	238	86	6	284	238
Fort Worth:						
March, 1915.....	103	138	2 1, 088	(1)	146	133
March, 1916.....	160	217	239	63	201	185
<i>Virginia (municipal).</i>						
Richmond:						
March, 1915.....	128	505	2 851	(1)	454	333
March, 1916.....	237	380	555	(1)	489	171

¹ Not reported.

² Number applying for work.

³ Does not include branches.

⁴ Includes branches.

the cultivation of their holdings, the purchase of supplies, and the disposal of products.

It is not recommended that the State should directly supply capital for the undertaking, but that it should take part in promoting, with State assistance, cooperative credit societies.

STRIKES AND LOCKOUTS IN THE UNITED STATES IN 1915.

Statistics of strikes and lockouts in the United States covering the years 1881 to 1905, inclusive, have been the subject of four annual reports of the Bureau of Labor Statistics, published in 1887, 1894, 1901, and 1906. The data for these reports were secured by thorough investigations by trained field agents, and it is probable that few strikes and lockouts were omitted. Because of the time and expense involved the Bureau has not considered it possible to continue this method, although it is probably the only one likely to secure complete returns.

In 1914 an attempt was made to compile a record of strikes and lockouts entirely from printed sources—newspapers, labor journals, trade-union periodicals, and manufacturers', trade, and other papers. In 1915 the same method was continued, and in connection with about 1,400 strikes an attempt was made to supplement the information thus obtained by sending a schedule of inquiry to persons thought to have detailed knowledge concerning them. About two-thirds of these schedules went to strikers or organizations representing them and one-third to employers or their organizations. In a number of cases schedules were sent to more than one person regarding the same strike. Seven hundred and forty-eight schedules were returned answered in whole or in part. In addition, a number of letters and circulars were sent asking for supplemental information. This report is based on the data secured from newspapers and from other sources, modified by the replies made to schedules and letters.

The number of strikes and lockouts covered in 1914 was 1,080, which has since been increased to 1,204, by examination of reports made after the close of the year. The number recorded in 1915, including those pending on the last day of 1914 and settled during the year 1915, was 1,246 strikes and 159 lockouts, a total of 1,405, which will probably be increased to 1,500 if the additional number found in reports this year approximates that found last year.

Whether strikes and lockouts have increased in number in the United States since 1905, the last year covered by the Bureau's field investigation, is not shown by the figures gathered during the last two years. It would be manifestly incorrect to compare the incomplete data so collected with the more comprehensive reports secured

in the former investigations. In spite of the incompleteness of the data for 1915, however, the figures give considerable information of value in regard to the labor disputes which occurred in that year.

It is often difficult to determine from the wording of a newspaper item whether the disturbance is a strike or not. Many papers refer to every misunderstanding between employers and their employees as a strike, and many employers refuse to admit that any disturbance in their establishments ever progressed beyond a misunderstanding. When there has been any question as to the classification of a dispute, effort has been made to secure statements from both sides, in two cases schedules having been sent to as many as five persons, and the decision as to the classification has been based upon the statements received. The rule has been to omit doubtful cases.

Under strikes have been included all disputes where the employees refused to work unless the management complied with certain demands, and under lockouts all disputes where the management refused to allow the employees to work except under conditions dictated by the employers.

The number of strikes occurring during the late summer and early fall largely exceeded those occurring at other times of the year. Two-thirds of those starting during the last six months of the year 1915 were for increase of wages or decrease of working hours. They were successful in most cases.

The so-called munitions strikes attracted special attention in 1915. These strikes started in Bridgeport, Conn., during the latter part of July, and spread rapidly to Rhode Island, Massachusetts, New York, Ohio, and other States where metal goods are manufactured. They consisted generally of a demand for a shorter working-day without reduction of wages, and in some cases the demand was for increased wages, though the strikers rarely got all the increase asked for.

The strikes in the clothing industry in New York, Boston, Philadelphia, Baltimore, and Chicago involved a large number of strikers, but their duration was comparatively short, except in Chicago, where the strike lasted for about three months and involved from 6,000 to 25,000 people.

Other strikes attracting wide attention were those in the building trades in Chicago from April to July, which practically paralyzed the building industry of that city for the time; the oil and chemical strikes in Elizabeth, N. J., and neighboring cities during the summer, which, though short, were accompanied with rioting and loss of life; the street-car strike in Chicago in June; and the strike of the silverworkers in Connecticut in October, which had not been settled at the close of the year. Though the long-continued coal strike in Colorado was brought to an end just before the opening of the year, the attention of the public continued to be directed to it through the efforts made by

the mine owners to settle the many questions that had not been finally considered at the termination of the strike. The coal strikes in the middle west were settled late in the fall of 1914 and early in 1915, with the exception of the eastern Ohio strikes, which were not settled until May. The copper mine strike in Arizona was settled just after the close of the year.

The causes of strikes and lockouts during the year were numerous. In few cases was the cause confined to one matter in dispute. In the following table an effort has been made to show the principal causes of the strikes tabulated, though this has been difficult in many cases on account of the indefinite character of the information available.

NUMBER OF STRIKES AND LOCKOUTS, BY CAUSES, 1915.

Matter of dispute.	Strikes.	Lockouts.	Matter of dispute.	Strikes.	Lockouts.
Increase of wages.....	238	12	For organizing.....		12
Decrease of wages.....	90	10	For open or closed shop.....	20	12
Nonpayment of wages.....	10	1	Discharge of foreman wanted..	11	
Increase of hours.....	7		Because of discharge of union		
Decrease of hours.....	67	7	men.....	60	13
Wages and hours.....	133	2	Because of employment of		
General conditions.....	35	4	nonunion men.....	40	5
Conditions and wages.....	28	1	Discrimination.....	8	
Conditions and hours.....	6		Sympathetic.....	9	1
Conditions, wages, and hours..	11	1	Jurisdictional.....	25	
Recognition of the union.....	37	15	Miscellaneous.....	113	22
Recognition and wages.....	26	1	Not reported.....	208	39
Recognition and hours.....	6				
Recognition, wages, and hours..	10	1	Total.....	1,246	159

The results of the disputes are difficult to state because in many cases both sides claimed the victory. When the question related to wage increase or reduction of working hours the unions generally asked for more than they expected to get and accepted less than they demanded but more than they were receiving before the strike. Again, strikes were frequently called when there was but one point at issue, but in their settlement that point was ignored and other matters settled that would not have been considered if there had been no strike. Each case has been considered by itself in making the following table and a larger number have been placed in the compromise class than either side to the controversy would probably admit was warranted.

RESULTS OF STRIKES AND LOCKOUTS, 1915.

Result.	Strikes.	Lockouts.
Won.....	164	16
Compromised.....	273	30
Lost.....	128	17
Employees returned, pending arbitration	28	2
Total.....	593	65
Pending.....	140	31
Not reported.....	513	63
Grand total.....	1,246	159

As shown in the following table the duration of the strikes that ended in 1915 varied from less than one day to three years and nine months, the latter being the strike of federated shopmen on the Harriman lines that was finally called off in June.

DURATION OF STRIKES AND LOCKOUTS.

Duration.	Strikes.	Lockouts.	Duration.	Strikes.	Lockouts.
Less than one day.....	10	.....	19 to 21 days.....	20	.....
1 day.....	30	1	22 to 24 days.....	22	3
2 days.....	43	.....	25 to 28 days.....	14	1
3 days.....	41	1	29 to 31 days.....	13	2
4 days.....	26	2	32 to 35 days.....	12	1
5 days.....	29	2	36 to 42 days.....	21	4
6 days.....	23	.....	43 to 49 days.....	9	.....
7 days.....	24	3	50 to 63 days.....	20	4
8 days.....	19	2	64 to 77 days.....	12	2
9 days.....	12	1	78 to 91 days.....	13	2
10 days.....	18	.....	92 to 199 days.....	22	7
11 days.....	12	.....	200 to 1,367 days.....	15	2
12 days.....	6	1			
13 days.....	13	2	Total.....	531	49
14 days.....	16	1			
15 to 18 days.....	16	5			

The total duration of these strikes was 18,973 days and of the lockouts 3,075 days, the average duration of the strikes being 36 days and of the lockouts 63 days. If, however, the 37 strikes and 9 lockouts which lasted more than three months are omitted from consideration, the average was 17 days for strikes and 27 days for lockouts.

The number of strikes and lockouts starting each month during the year is shown in the following table:

NUMBER OF STRIKES AND LOCKOUTS BY MONTHS IN WHICH STARTED, 1915.

Month.	Strikes.	Lockouts.	Month.	Strikes.	Lockouts.
Pending Dec. 31, 1914.....	37	17	September.....	146	14
January.....	49	13	October.....	102	7
February.....	45	12	November.....	102	10
March.....	72	14	December.....	70	8
April.....	88	16			
May.....	110	10	Total.....	1,104	148
June.....	52	6	Month not stated.....	142	11
July.....	94	14			
August.....	137	7	Grand total.....	1,246	159

In the above table only those strikes are counted as pending December 31, 1914, which were actually settled during the year 1915.

In 701 strikes and 144 lockouts the employees were connected with unions; in 117 strikes and 3 lockouts they were nonunion employees; in 29 strikes they were nonunion at the time of striking but organized almost immediately after; the relation of employees to unions was

not reported for 399 strikes and 12 lockouts. In 926 strikes and 128 lockouts all the employees directly affected were men, and in 31 strikes and 4 lockouts all were women, while both sexes were affected in 113 strikes and 18 lockouts; the sex of employees was not reported for 176 strikes and 9 lockouts.

The number of persons involved in strikes and lockouts in 1915 is shown in the following table:

NUMBER OF STRIKES AND LOCKOUTS BY CLASSIFIED NUMBER OF PERSONS INVOLVED, 1915.

Group of persons involved.	Strikes.	Lockouts.	Group of persons involved.	Strikes.	Lockouts.
1 to 5.....	45	17	351 to 400.....	18	1
6 to 10.....	45	12	401 to 450.....	9	
11 to 15.....	22	8	451 to 500.....	22	2
16 to 20.....	29	6	501 to 600.....	19	
21 to 25.....	27	7	601 to 700.....	13	1
26 to 30.....	25	2	701 to 800.....	14	1
31 to 40.....	36	12	801 to 1,000.....	17	3
41 to 50.....	38	9	1,001 to 1,200.....	15	
51 to 60.....	21	2	1,201 to 1,500.....	16	2
61 to 70.....	18	2	1,501 to 2,000.....	10	2
71 to 80.....	22	4	2,001 to 3,000.....	14	
81 to 90.....	8	1	3,001 to 5,000.....	11	
91 to 100.....	27	1	5,001 to 10,000.....	9	
101 to 125.....	35	4	10,001 to 30,000.....	7	1
126 to 150.....	37	9			
151 to 175.....	12	1	Total.....	752	121
176 to 200.....	43	5	Not reported.....	494	38
201 to 250.....	31	3			
251 to 300.....	24	1	Grand total.....	1,246	159
300 to 350.....	13	2			

There were 468,983 persons involved in the 752 strikes for which information was available and 35,298 in the 121 lockouts, the proportion of males to females being about 9 to 1. The average employees per strike was 624 and per lockout 293, but omitting the 41 strikes and 1 lockout involving 2,000 persons and upward, the average was 261 per strike and 145 per lockout.

In 1,198 disturbances the number of establishments involved in each was stated. In each case only 1 establishment was involved by 929 strikes and 107 lockouts, or 86 per cent of all disputes for which this information was available; 2 by 46 strikes and 11 lockouts; 3 by 12 strikes and 8 lockouts; 4 by 11 strikes and 1 lockout; from 5 to 86 by 49 strikes and 16 lockouts; from 111 to 500 by 6 strikes, while one strike involved 700 and one 1,200 establishments.

The following tables show the number of strikes and lockouts in the 13 industry groups and in the 14 individual occupations in which the largest number of strikes occurred. Corresponding figures for 1914 are given from the report of last year. In comparing the two years, allowance should be made for the incompleteness of the figures, unavoidable under the method adopted for securing the data.

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NUMBER OF STRIKES IN THE 13 INDUSTRY GROUPS IN WHICH THE LARGEST
NUMBER OF STRIKES OCCURRED, 1914 AND 1915.

Industry.	1915		1914
	Strikes.	Lockouts.	Strikes and lockouts.
Metal trades.....	280	41	129
Building trades.....	204	27	275
Clothing industries.....	127	12	78
Textile work.....	77	7	54
Mining.....	65	2	51
Baking.....	30	33	47
Iron and steel workers.....	30	.....	14
Teaming.....	28	2	34
Furniture.....	16	4	18
Theatrical employees.....	14	5	20
Transportation.....	17	1	52
Lumber.....	13	1	40
Printing and publishing.....	4	3	20

NUMBER OF STRIKES IN THE 14 INDIVIDUAL OCCUPATIONS IN WHICH THE LARGEST
NUMBER OF STRIKES OCCURRED, 1914 AND 1915.

Occupation.	1915		1914
	Strikes.	Lockouts.	Strikes and lockouts.
Machinists.....	163	16	44
Bakers.....	30	33	47
Miners, coal.....	55	2	48
Carpenters.....	42	8	35
Metal polishers.....	37	13	26
Molders.....	42	6	27
Plumbers and steam fitters.....	34	9	83
Teamsters.....	28	2	30
Tailors.....	26	1	14
Street-railway employees.....	22	2	27
Painters.....	20	4	61
Sheet-metal workers.....	21	2	13
Electrical workers.....	20	.....	9
Weavers.....	19	1	4

The following table shows the number of strikes and lockouts in 1914 and 1915 by States and by sections of the country; on account of their incompleteness the figures for the two years do not admit of close comparison:

NUMBER OF STRIKES, BY STATES AND SECTIONS, 1914 AND 1915.

State or section.	1914		1915		State or section.	1914		1915	
	Strikes.	Lock-outs.	Strikes.	Lock-outs.		Strikes.	Lock-outs.	Strikes.	Lock-outs.
Alabama.....	6	1	1	2	North Carolina.....	3	.....	3	.....
Alaska.....	1	.....	.....	.....	North Dakota.....	.....	1	1	.....
Arizona.....	3	.....	4	1	Ohio.....	86	5	115	18
Arkansas.....	4	4	2	1	Oklahoma.....	6	.....	5	1
California.....	49	4	21	6	Oregon.....	8	.....	6	1
Colorado.....	7	3	4	.....	Pennsylvania.....	102	5	148	15
Connecticut.....	20	1	141	8	Porto Rico.....	2	.....	7	1
Delaware.....	4	.....	14	.....	Rhode Island.....	13	1	22	2
Dist. of Columbia.....	2	.....	1	.....	South Carolina.....	3	.....	4	.....
Florida.....	3	.....	.....	.....	South Dakota.....	1	.....	1	.....
Georgia.....	12	1	9	2	Tennessee.....	14	1	4	3
Idaho.....	1	.....	.....	.....	Texas.....	30	5	9	.....
Illinois.....	84	11	52	21	Utah.....	9	.....	6	.....
Indiana.....	38	7	21	9	Vermont.....	2	.....	5	1
Iowa.....	11	5	11	2	Virginia.....	5	.....	9	.....
Kansas.....	4	1	6	1	Washington.....	45	8	25	5
Kentucky.....	15	1	14	1	West Virginia.....	12	2	23	3
Louisiana.....	9	1	3	1	Wisconsin.....	39	4	15	5
Maine.....	11	.....	6	.....	Wyoming.....	.....	.....	1	.....
Maryland.....	18	1	11	1	In several States.....	4	.....	1	.....
Massachusetts.....	96	3	131	7					
Michigan.....	27	9	29	3	Total.....	1,100	104	1,246	150
Minnesota.....	19	5	11	3	North of the Ohio				
Mississippi.....	1	.....	1	.....	and east of the Mis-				
Missouri.....	28	5	37	4	sissippi.....	793	61	1,024	124
Montana.....	10	.....	3	.....	South of the Ohio				
Nebraska.....	3	.....	2	.....	and east of the Mis-				
Nevada.....	2	.....	.....	.....	sissippi.....	76	6	75	12
New Hampshire.....	7	.....	5	.....	West of the Missis-				
New Jersey.....	71	3	100	9	sippi.....	231	37	147	23
New York.....	150	6	196	22					

The largest number of disputes occurred in the leading manufacturing States, New York, Pennsylvania, Connecticut, Massachusetts, and Ohio, having 801, or considerably more than half the strikes and lockouts shown for 1915.

The following table shows the number of strikes and lockouts in cities in which 10 or more disputes occurred during 1915, with the number of disturbances occurring in the same city for the year 1914. Allowance for incompleteness of data should be made in comparing the two years.

CITIES IN WHICH 10 OR MORE STRIKES OCCURRED IN 1914 AND 1915.

City.	1915		1914	City.	1915		1914
	Strikes.	Lock-outs.			Strikes.	Lock-outs.	
New York, N. Y.....	127	15	74	Hartford, Conn.....	15	1	3
Bridgeport, Conn.....	51	2	3	New Haven, Conn.....	16	.....	2
Philadelphia, Pa.....	36	6	19	St. Louis, Mo.....	14	2	9
Chicago, Ill.....	25	15	24	Newark, N. J.....	13	2	9
Cleveland, Ohio.....	32	3	18	Wilmington, Del.....	13	.....	2
Boston, Mass.....	26	3	27	Kansas City, Mo.....	11	2	17
Springfield, Mass.....	22	1	6	Seattle, Wash.....	11	2	5
Worcester, Mass.....	20	2	8	Baltimore, Md.....	11	1	14
Pittsburgh, Pa.....	21	.....	20	Wheeling, W. Va.....	12	.....	1
Toledo, Ohio.....	16	4	8	Waterbury, Conn.....	11	.....	1
Detroit, Mich.....	16	3	22	Trenton, N. J.....	10	1	9
Elizabeth, N. J.....	17	.....	2	Cincinnati, Ohio.....	9	2	11
Jersey City, N. J.....	16	1	5	Reading, Pa.....	9	2	3

NUMBER OF STRIKES AND LOCKOUTS IN SPECIFIED OCCUPATIONS, BY STATES, 1915.

STRIKES.

States, etc.	Agricultural workers.	Bakers.	Barbers.	Brass and brass goods workers.	Brewery workers.	Brick-makers.	Broom and brush-workers.	Building trades.					
								Bricklayers.	Carpenters.	Electrical workers.	Lathers.	Laborers and hod carriers.	Painters.
Arkansas.....													1
Colorado.....		1					2					1 1	
Connecticut.....		1		8	2			1	1	1		1 1	
Delaware.....			1		1								
District of Columbia.....					1								
Illinois.....		3	1			2			1				1
Indiana.....		1							1				
Iowa.....						1			1	1			
Louisiana.....									1				
Maryland.....		2											
Massachusetts.....	1	4			1					3		1 1	4
Minnesota.....										3			
Missouri.....		1							1	2			1
Montana.....		1									1		
Nebraska.....												1 1	
New Hampshire.....									1				
New Jersey.....		3		1					2			1 1	
New York.....		8		2		1			4	2			1
North Carolina.....													1
North Dakota.....	1												
Ohio.....			1	1	1	2		1	6	2			1 5
Oklahoma.....									1				
Oregon.....		1			1								
Pennsylvania.....		1	2		3				13	4	2	1 1	1 5
Porto Rico.....	1	2							3				
Rhode Island.....									1				1
Tennessee.....								1					
Texas.....		1											
Utah.....										1			
Virginia.....			1		3					1			
Washington.....					1								
West Virginia.....									2		2	1 1	
Wisconsin.....					1				3				
Total.....	3	30	6	12	15	6	2	3	42	20	5	7	20

LOCKOUTS.

California.....		1											1
Connecticut.....		2											
Georgia.....									1				
Illinois.....		6							2		1		1
Indiana.....									1				
Iowa.....									1				
Kansas.....									1				
Massachusetts.....		2											
Missouri.....		1											
New Jersey.....		4											
New York.....		10							1				
Ohio.....													2
Pennsylvania.....		4							1				
Porto Rico.....		1											
Tennessee.....			1										
Washington.....		1											
Wisconsin.....		1											
Total.....		33	1						8		1		4

¹ Hod carriers. ² Building laborers. ³ Including 2 of glaziers. ⁴ Including 1 of paper hangers.

NUMBER OF STRIKES AND LOCKOUTS IN SPECIFIED OCCUPATIONS, BY STATES,
1915—Continued.

STRIKES.

States, etc.	Building trades—Concluded.							Carriage and wagon workers.	Chemical workers. ¹	Clothing.			
	Plasterers.	Plumbers and steam fitters.	Sheet metal workers.	Structural iron workers.	Tile layers.	Tinsmiths.	Occupation not specified.			Boot and shoe makers.	Button makers.	Cloak, waist, and skirt makers.	Corset makers.
Arkansas.....		1											
California.....	1						1			1			
Connecticut.....		1	2	1			1	1		1			5
Delaware.....		1	2			2			1				
Georgia.....		1		2			1						
Illinois.....	2	3		1			3						
Indiana.....		2			1						1		
Iowa.....	1	1	1										
Kentucky.....				1									
Maine.....		1								1			
Massachusetts.....		3	1				7			1	1	2	1
Michigan.....		2			1				1				
Minnesota.....					1		1			1			
Missouri.....		2	1				1			1			
Montana.....							1						
New Hampshire.....										1			
New Jersey.....		2	1			1	2		14			1	
New York.....		1	1		1				2	2	1		
Ohio.....		5	2	1			8	1	1				
Oklahoma.....		1											
Pennsylvania.....		4	3	1			3	1	2	1			
Rhode Island.....		10	2										
Tennessee.....		1											
Texas.....			1				1						
Utah.....		10											
Washington.....			1				1					1	
West Virginia.....			3				2						
Wisconsin.....					1								
Total.....	4	34	21	7	5	3	33	3	21	10	3	4	6

LOCKOUTS.

Alabama.....		1											
California.....					1							1	
Illinois.....		1	1										
Indiana.....		1											
Iowa.....	1												
Kentucky.....		1											
Minnesota.....		1											
New York.....	1		1										
Ohio.....		1								1			
Pennsylvania.....		1											
Tennessee.....		1											
Washington.....		1											
Total.....	2	9	2		1					1		1	

¹ Includes bleachers, soap makers, paint makers, powder makers, refiners, etc.² Including 1 of plumbers.³ Comprising 1 of plumbers and 2 of steam fitters.⁴ Coppersmiths.⁵ Plumbers.⁶ Including 3 of plumbers and 1 of steam fitters.⁷ Including 1 of coppersmiths.⁸ Automobile workers.⁹ Comprising 3 of plumbers and 1 of steam fitters.¹⁰ Steam fitters.

NUMBER OF STRIKES AND LOCKOUTS IN SPECIFIED OCCUPATIONS, BY STATES,
1915—Continued.

STRIKES.

States, etc.	Clothing—Concluded.								Elec- tric and gas sup- ply work- ers.	Freight handling and teaming.		
	Glove mak- ers.	Hat and cap mak- ers.	Rain- coat mak- ers.	Shirt mak- ers.	Chil- dren's dress mak- ers.	La- dies' cloth- ing mak- ers.	Men's cloth- ing mak- ers.	Tai- lors.		Freight han- dlers.	Long- shore- men.	Team- sters.
California.....						1		3			1	
Connecticut.....						1	1		5	3		
Illinois.....	1					2	2	2				3
Kansas.....									1			
Kentucky.....								1				
Maryland.....						1		1			1	
Massachusetts.....			1	1			2	2		6		1
Michigan.....								1			1	
Minnesota.....									1		1	
Missouri.....							1					4
New Jersey.....		1					2		2	4	2	2
New York.....	1	19	3		4	20	12	9		4	6	5
Ohio.....												5
Oregon.....								2				
Pennsylvania.....				1				2			2	4
South Dakota.....								1				
Texas.....												1
Virginia.....								1				
Washington.....								1			1	1
West Virginia.....												1
Wisconsin.....							1					1
Total.....	2	20	4	2	4	25	21	26	7	5	17	28

LOCKOUTS.

Illinois.....							1					1
Maryland.....						1						
Massachusetts.....						2						
Missouri.....												1
New York.....					1	2		1				
Ohio.....							1					
Washington.....											1	
Wisconsin.....	1											
Total.....	1				1	5	2	1			1	2

¹ Including 15 of millinery and straw hat workers.

² Shirt ironers.

NUMBER OF STRIKES AND LOCKOUTS IN SPECIFIED OCCUPATIONS, BY STATES,
1915—Continued.

STRIKES.

States, etc.	Furniture workers.			Glass workers.	Hard-ware workers.	Horse-shoers.	Iron and steel workers.	Laun-dry workers.	Leath-er workers.	Lum-ber and tim-ber workers.	Meat cutters and butch-ers.	Metal trades.	
	Cab-inet mak-ers and carv-ers.	Up-hol-ster-ers.	Oo-cu-pa-tion not spec-ified.									Black-smiths.	Boil-er mak-ers.
Alabama.....													1
Arizona.....													1
California.....				1				3					
Connecticut.....			2		8		3	4					1
Delaware.....												1	
Illinois.....			1	2						1		1	
Indiana.....				1				1					
Iowa.....			1								1		
Kansas.....								1					
Kentucky.....						1	2						
Louisiana.....													1
Maryland.....							1						
Massachusetts.....		1					4						
Michigan.....				2								1	
Missouri.....				1				3					3
New Jersey.....			1	2		1	7		1		3	3	
New York.....	5		2	1			2		4		2		1
Ohio.....	1			2			6	3				2	
Oregon.....										1			
Pennsylvania.....		2		1	3		1						
Rhode Island.....												1	
Texas.....													1
Virginia.....													1
Washington.....										9			2
West Virginia.....				1			4				1		
Wisconsin.....										2			1
Total.....	6	3	7	14	11	2	30	15	5	13	7	9	13

LOCKOUTS.

California.....						1							
Illinois.....	2												
Indiana.....				1									
Louisiana.....											1		1
New Jersey.....											1		
New York.....	1	1											
Ohio.....								1			1	2	1
Oklahoma.....													1
Pennsylvania.....						1							
Washington.....										1			
West Virginia.....				1				1					
Total.....	3	1		2		2		2		1	2	2	3

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NUMBER OF STRIKES AND LOCKOUTS IN SPECIFIED OCCUPATIONS, BY STATES,
1915—Continued.

STRIKES.

States. etc.	Metal trades—Concluded.					Occupation not specified.	Miners.		Musicians and theatrical employees.			Paper makers.	Paper goods makers.
	Machinists.	Metal polishers.	Molders.	Pattern makers.	Stove mounters.		Coal.	Ore.	Moving picture operators.	Orchestras.	Stage employees.		
Arizona.....								3					
California.....		1				1			1				
Connecticut.....	38	16	3			4					1		2
Delaware.....	2											1	
Georgia.....	3												
Illinois.....	3	3	1		1		2						
Indiana.....	4	1	1		1		2						
Kansas.....	1						3						
Kentucky.....	3						5						
Maine.....												1	1
Maryland.....	1		1	1									
Massachusetts.....	26	1	10	1		1						2	
Michigan.....	8	5	4										
Minnesota.....			2						1				
Missouri.....	4	1						3					
New Jersey.....	13	2	1						1				1
New York.....	18	2	5	1				1		1	2	10	
North Carolina.....	1												
Ohio.....	18	5	3	1			8		1	2			
Oklahoma.....							1	1			1		
Oregon.....											1		
Pennsylvania.....	13		7	1	1		29	1					
Rhode Island.....	4		2	1									
Tennessee.....			1										
Texas.....	1								1				
Utah.....								1					
Virginia.....	1												
Washington.....						1					2		
West Virginia.....							4						
Wisconsin.....	1		1										
Wyoming.....							1						
Total.....	163	37	42	6	3	7	55	10	5	3	7	14	4

LOCKOUTS.

Alabama.....	1												
Arkansas.....							1						
Connecticut.....		4	1	1									
Illinois.....	1	3											
Indiana.....	1	2	1								1		
Massachusetts.....	3												
Michigan.....	1	1											
New Jersey.....		2											
New York.....	1		2										
Ohio.....	5	1	1									1	
Oregon.....											1		
Pennsylvania.....	2		1						1				
Tennessee.....									1				
Washington.....							1						
Wisconsin.....	1										1		
Total.....	16	13	6	1			2		2		3	1	

¹ Including 12 of silver workers. ² Including 1 of bandsmen. ³ Including 1 of silver workers.

NUMBER OF STRIKES AND LOCKOUTS IN SPECIFIED OCCUPATIONS, BY STATES,
1915—Continued.

STRIKES.

States, etc.	Pot- ters.	Print- ing and pub- lish- ing.	Rail- road trans- por- ta- tion.	Rub- ber work- ers.	Sta- tion- ary engi- neers and fire- men.	Stone workers.		Street and sewer em- ploy- ees.	Street rail- way em- ploy- ees.	Tele- graph and tele- phone opera- tors.	Textile workers.	
						Gran- ite cut- ters.	Quar- ry work- ers.				Car- pet mak- ers.	Cot- ton and wool- en- work- ers.
California.....						2	1	1		1		
Connecticut.....			2	7		1						1
Delaware.....								1				
Georgia.....					1							
Illinois.....			2						1			
Indiana.....							2		1			
Iowa.....									1			
Louisiana.....		1										
Maine.....												1
Maryland.....							1					
Massachusetts.....			1					1	4			
Michigan.....			2						1			
Missouri.....			1					1		1		
New Hampshire.....						1						
New Jersey.....	3	1	1	2								1
New York.....	1	1	5		2			4	5	1		
Ohio.....	4					2		1	1			
Pennsylvania.....			2			1			6		3	2
Rhode Island.....									1			
South Carolina.....									1			
Utah.....		1				1	1					
Vermont.....						1	3					
Virginia.....					1							
Washington.....								1				
West Virginia.....					1							
Wisconsin.....						1	1					
Not specified.....			1									
Total.....	8	4	17	9	5	10	9	10	22	3	3	5

LOCKOUTS.

California.....									1			
Georgia.....			1									
Iowa.....										1		
Michigan.....		1										
Minnesota.....		2										
Missouri.....					1					1		
Pennsylvania.....									1			
West Virginia.....	1											
Wisconsin.....				1								
Total.....	1	3	1	1	1				2	2		

¹Wireless operators.
²Paving cutters.
³Aluminum reduction workers.
⁴Porcelain workers.

NUMBER OF STRIKES AND LOCKOUTS IN SPECIFIED OCCUPATIONS, BY STATES, 1915—Concluded.

STRIKES.

States, etc.	Textile workers—Concluded.								To- bacco work- ers.	Trunk and bag mak- ers.	Wait- ers, cooks, and bar- tend- ers.	Mis- cella- neous work- ers.
	Dyers.	Ho- sery and knit goods work- ers.	Lace work- ers.	Print cut- ters.	Silk work- ers.	Spin- ners.	Weav- ers.	Occu- pa- tion not speci- fied.				
California.....											1 1	
Connecticut.....		2	1		1			2				5
Delaware.....				1								
Georgia.....												1
Iowa.....												1
Illinois.....	1								1		1 1	4
Indiana.....												2
Kentucky.....									1			
Maine.....							1					
Massachusetts.....		3				3	8	6			2 2	12
Mississippi.....												1
Missouri.....	1										1 2	1
Nebraska.....												1
New Hampshire.....							1	1				
New Jersey.....	1				8				3	1		2
New York.....	1			1							1 1	8
North Carolina.....								1				
Ohio.....				1					1		2 5	6
Pennsylvania.....	2	2					6	3	1	1		5
Porto Rico.....									1			
Rhode Island.....	1	1				1	2	2				1
South Carolina.....							1	2				
Tennessee.....								1				
Texas.....												2
Vermont.....												1
Washington.....												3
West Virginia.....												1
Wisconsin.....												1
Total.....	7	8	1	3	9	4	19	18	8	2	12	58

LOCKOUTS.

Arizona.....											1 1	
Illinois.....							1					
New Jersey.....					2							
Pennsylvania.....				1				1		1		
Rhode Island.....			2									
Vermont.....												1
Total.....			2	1	2		1	1		1	1	1

1 Waiters. 2 Comprising 2 of waiters and 3 of waiters and bartenders.
3 Comprising 1 of waiters and 1 of bartenders. 4 Waiters and cooks.

STRIKES REPORTED BY THE AMERICAN FEDERATION OF LABOR, 1914-15.

At the annual meeting of the American Federation of Labor in November, 1915, a statement was made in regard to the number of strikes occurring during the year preceding the meeting. This statement was made up from reports filed by the individual unions that compose the Federation. The total number of these disturbances and their results were as follows. The figures for the preceding year are also given.

Result.	1914-15	1913-14
Won.....	552	543
Compromised.....	115	118
Pending.....	218	236
Lost.....	119	60
Total.....	1,004	957

In using the following statement for 1914-15, it must be borne in mind that the report is entirely by unions, and not by occupations, that no strikes are included in which the members were not connected with unions affiliated with the Federation, that only strikes officially recognized by the national bodies are included, that where no strikes are given for a union it means that that union made no report, that the year covered in this report ended some time before the 1st of November, and that the list includes some strikes in Canada as well as in the United States. This latter number is probably small, since the Canadian Department of Labor reports that only 43 strikes occurred in Canada during 1915.

STRIKES IN SPECIFIED UNIONS, AND THEIR RESULTS, AS REPORTED BY THE
AMERICAN FEDERATION OF LABOR, 1914-15.

Unions.	Number of strikes and lockouts—					Number of persons involved.
	Won.	Com-promised.	Pend-ing.	Lost.	Total.	
American Federation of Labor locals.....	8	10	5	3	26	4,837
Asbestos workers.....	4				4	400
Barbers.....						344
Billposters.....			1		1	15
Blacksmiths.....	1				1	75
Boiler makers.....	1	1	3	2	7	1,048
Bookbinders.....			1		1	
Boat and shoe workers.....	3				3	164
✓Brewery workers.....	11	7	8	2	28	3,726
Brick, tile, and terra-cotta workers.....	1		1		2	
Broom makers.....	3			1	4	80
Brush makers.....			2	1	3	35
Carpenters, Brotherhood.....	12	2	1	1	16	16,200
Carvers, wood.....	6	1		1	8	24
✓Cigar makers.....	3	1	8	3	15	925
✓Cloth hat and cap makers.....	29		2	9	40	600
Commercial telegraphers.....			1	1	2	200
Coopers.....	3		1		4	140
Electrical workers.....	11	3	3	2	19	3,760
Elevator constructors.....	1				1	55
Engineers, steam.....	6		5	4	15	59
Firemen, stationary.....	11	3	2		16	864
Foundry employees.....	1				1	180
Fur workers.....	8				8	10,000
Garment workers, United.....	5			2	7	700
Garment workers, ladies'.....	6	2	2		10	5,500
Glass workers, flint.....			6		6	589
✓Glove workers.....	1		1	1	3	1,930
✓Granite cutters.....	17		7		24	5,000
Hod carriers.....	14		1		15	2,000
Horseshoers.....	1		1		2	281
✓Hotel and restaurant employees.....	62	10	9	9	90	2,090
Iron and steel workers.....	3			3	6	1,200
Lace operatives.....			2		2	200
Lathers.....	2				2	1,400
Laundry workers.....	7	4	2	1	14	320
Leather workers on horse goods.....			2		2	15

¹ Lockout.

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STRIKES IN SPECIFIED UNIONS, AND THEIR RESULTS, AS REPORTED BY THE AMERICAN FEDERATION OF LABOR, 1914-15—Concluded.

Unions.	Number of strikes and lockouts—					Number of persons involved.
	Won.	Com-promised.	Pend-ing.	Lost.	Total.	
Lithographers.....				1	1	80
Longshoremen.....	12	2		1	15	6,000
Machine printers and color mixers.....			3		3	40
Machinists.....	43	7	51		101	11,500
Maintenance of way employees.....				1	1	
Meat cutters and butcher workmen.....				1	1	343
Metal polishers.....	30	5	15	3	53	720
Metal workers, sheet.....	7	3	2	4	16	500
Mine workers, United.....	1				1	13,000
Miners, Western Federation of.....	1	1	1		3	7,000
Molders, iron.....			20		20	1,091
Pattern makers.....	12		4		16	166
Paving cutters.....	5				5	250
Photoengravers.....	1		1		2	
Plasterers.....	26	1			27	2,177
Plumbers and steam fitters.....	39	6	13		58	2,755
Potters, operative.....			2		2	90
Printing pressmen.....	1				1	18
Pulp and sulphite workers.....			1		1	650
Quarry workers.....			1		1	1,600
Railway carmen.....	1				1	40
Railway employees, street.....	10		1	1	12	20,980
Slate and tile roofers.....			1		1	140
Spinners.....	3				3	150
Stage employees, theatrical.....	60	10	10		80	550
Stone cutters.....	1	1			2	100
Stove mounters.....	2		2		4	90
Tailors.....	4	1	5		10	50
Teamsters.....	24	2			26	3,600
Textile workers.....	10	26	1		37	5,226
Tile layers.....	3	1		1	5	250
Timber workers.....				55	55	
Travelers' goods and leather novelty workers.....	5				5	300
Typographical Union.....	3		6	3	12	295
Upholsterers.....	7	5	1	2	15	225
Total.....	552	115	218	119	1,004	144,932

¹ In strikes pending.

² Lockouts.

NEW STREET RAILWAY WAGE AGREEMENTS IN WASHINGTON, D. C.

Following a dispute concerning rates of wages, hours of labor, and working conditions, and a two days' strike—March 5 and 6—on the two street railway lines in Washington, D. C., conciliation was affected by the Hon. Oliver P. Newman, president of the Board of Commissioners of the District of Columbia, and Mr. William Blackman, acting as a conciliator for the United States Department of Labor, whereby the employees returned to work pending conferences between the company officials and committees of their employees. Agreements were reached March 11 by the officials and employees of both companies, which agreements are here set forth. The agreement between the Washington Railway & Electric Co. and its employees is presented verbatim:

AGREEMENT.

WASHINGTON, D. C.,
March 11, 1916.

For the purpose of settling all controversies now existing between the Washington Railway & Electric Co. and its employees, it is hereby agreed:

That the following employees shall be reinstated to their former positions (23 names):

For the adjustment of grievances which may arise in future, the committee which signs this agreement shall be constituted a grievance committee, with power to fill any vacancies which may occur in the committee hereafter. Should any question arise under this agreement as to the true intent and meaning thereof, or as to justice in the action of the company in discharging or disciplining any employee, or any grievances which can not be adjusted by conference between the interested employee and the officials of the company, or by the said officials and the grievance committee, then such question upon application of the grievance committee shall be referred for decision to the Public Utilities Commission of the District of Columbia as a board of arbitration, whose decision shall be final.

It is agreed that the members of the grievance committee shall be granted leave of absence on grievance business when such leave should be required, provided that in cases of extraordinary requirements in service leaves of absence should not be requested or granted.

1. *Hours and conditions of work.*—It is agreed that at least eight hours continuous rest will be allowed each conductor and motorman between the termination of his run on one day and the beginning of his work on the following day, except in cases of unusual traffic demands due to extraordinary conditions. No regular man shall be required to perform extra duty when an extra man is available, and where motormen and conductors are called to report for extra duty, and for any cause not their own, they do not go out within one hour they shall be paid from the end of said hour until relieved at their regular rate of wages. When men are asked to report for snow-plow or sand-car work they shall be paid from the time of reporting until relieved from duty.

2. *Wages.*—The wages of all motormen and conductors shall be as follows:

	Cents per hour.
First year.....	23½
Second, third, fourth and fifth years.....	24½
Sixth, seventh, eighth, ninth, and tenth years.....	25½
After 10 years of service.....	27

The present practice in the assignment of runs shall be continued.

3. It is understood and agreed that this agreement constitutes a full settlement of all controversies now existing between the company and its employees.

4. This agreement shall be binding upon the company and its employees for a period of one year from date.

The wage increase provided for herein shall be effective on and after March 15, 1916; other provisions of this agreement which differ from the present practice of the company shall be put into effect at the earliest possible date, and not later than April 15, 1916, this to permit the necessary changes and adjustments in existing schedules and regulations.

The above agreement was signed by the president of the company and a committee of three employees and attested by the president of the Board of Commissioners of the District of Columbia.

The agreement of the Capital Traction Co. is nearly the same as that of the Washington Railway & Electric Co. Five men to be reinstated are named in the agreement. In the paragraph on hours and conditions of work the words, "and where motormen and conductors are called to report for extra duty, and for any cause not their own they do not go out within one hour they shall be paid from the end of said hour until relieved at their regular rate of wages," do not appear in the Capital Traction agreement, while the agreement of that company contains the following:

The present practice in the assignment of runs and in the method of payment of conductors and motormen called to report for extra duty shall be continued.

The wages for the Capital Traction Co. also differ slightly from those of the Washington Railway & Electric Co., the scale being:

	Cents per hour.
First year.....	23½
Second, third, and fourth years.....	24½
Fifth and sixth years.....	25½
Seventh, eighth, and ninth years.....	26½
Tenth year and over.....	27

For more than a year the United States Bureau of Labor Statistics has been compiling a voluminous report concerning wages, hours of labor, and working conditions in street railway operation in the United States. Data were collected by special agents of the Bureau in 81 cities, and much material has been collected by correspondence from other cities. The figures taken were for a pay period in 1914. The report has required a great amount of labor in compilation and is not yet entirely finished. As a part of this study, data were obtained for the two companies in Washington, D. C. The wage scales for these companies are here given in advance.

According to the scale of the Capital Traction Co., all motormen and conductors were paid a flat rate of 22.5 cents an hour. Under a merit system, based on satisfactory service, this company has also paid annually on July 1 a bonus, varying in amount according to the number of years of satisfactory service completed before that date, as follows: \$25 after one year, \$50 after two to four years, \$75 after five to nine years, and \$100 after ten years. An employee is not paid a bonus if his service is unsatisfactory during the 12 months immediately preceding the date of the annual bonus payments, but credit for preceding years of good service is revived by a subsequent year of good service.

The following table shows the hourly rate of pay of employees, classified as to period of service as of November, 1914, with allowances added for bonus payments as of July 1, 1914. Employees are

off duty an average of one day in eight and have two weeks' vacation each year, during which they receive no pay. Assuming 300 full working days of 10 hours each a year, the hourly rate equivalent of the bonus was computed and added to the flat rate of 22.5 cents to ascertain the full rate for employees who received bonuses. This gave a rate of 23.3 cents per hour for those receiving a \$25 bonus, 24.2 cents for those receiving \$50, 25 cents for those receiving \$75, and 25.8 cents for those receiving \$100. For purposes of comparison the table also shows the scale of March 11, 1916.

HOURLY WAGES, INCLUDING BONUSES, OF MOTORMEN AND CONDUCTORS OF THE CAPITAL TRACTION CO. IN NOVEMBER, 1914, AND RATES UNDER SCALE OF MAR. 11, 1916.

Period of service.	Rate of pay per hour, including bonus, Nov., 1914.	Number of employees at each rate.				Per cent of employees of specified years of service or less.				Rate per hour under scale of Mar. 11, 1916.
		Motormen.		Conductors.		Motormen.		Conductors.		
		Regu-lar.	Extra.	Regu-lar.	Extra.	Regu-lar.	Extra.	Regu-lar.	Extra.	
First year.....	\$0. 225	38	45	75	49	15	70	29	75	\$0. 23½
Second year.....	. 225	24	6	35	4	26	81	47	86	. 24½
	. 233	6	1	11	3					
	. 225	16	1	19						
Third year.....	. 233	7		18	1	38	86	64	91	. 24½
	. 242	6	2	4	2					
	. 225	1	2	2	1					
Fourth year.....	. 233	3		6		44	91	70	94	. 24½
	. 242	11	1	8	1					
	. 225	2		2						
Fifth year.....	. 233	1				50	91	75	95	. 25½
	. 242	13		12	1					
	. 225	1	1	2						
Sixth year.....	. 233	1				57	94	82	95	. 25½
	. 242	13		10						
	. 250	3	1	6						
Seventh year.....	. 225	1		1		62	94	87	95	. 26½
	. 242	7		5						
	. 250	6		5						
Eighth year.....	. 225	1			1	68	94	89	97	. 26½
	. 250	14		5						
	. 225	1								
Ninth year.....	. 250	8		4	1	72	94	90	98	. 26½
	. 225	5	2							
	. 233	1								
Tenth year and over.....	. 242	1				100	100	100	100	. 27
	. 250	12		6						
	. 258	54	2	19	1					
Total and average:										
Motormen, regular..	. 240	257								
Motormen, extra...	. 227		64							
Conductors, regular	. 234			255						
Conductors, extra..	. 227				65					

To make clear the information contained in this table, take the "Third year" as an illustration: The flat rate of 22.5 cents per hour was received by 16 regular motormen, 1 extra motorman, and by 19 regular conductors; that is, these men received no bonus. The lowest bonus, \$25, was paid to 7 regular motormen, 18 regular conductors, and 1 extra conductor, making their hourly rate 23.3 cents. The next higher bonus of \$50 per year (making the hourly

rate 24.2 cents) was paid to 6 regular motormen, 4 regular conductors, and 2 each of the extra conductors and motormen. These were all third-year men. The table is to be read in similar manner for fourth, fifth, etc., year men, bearing in mind that the numbers listed as receiving 25 cents per hour were those receiving a \$75 bonus and those receiving 25.8 cents were those getting the \$100 bonus. The company will discontinue these bonuses under the new agreement, which increases the rates for all employees by years of service to the amount stated in the last column of the table. Under the heading "Per cent of employees of specified years of service or less" are shown the per cent in each occupation who have worked for the company the stated period of service or less; for instance, 15 per cent of the regular motormen and 70 per cent of the extras had worked 1 year or less, 26 per cent of the regular motormen and 81 per cent of the extras had worked 2 years or less; and in the same manner it is shown that 47 per cent of the regular and 86 per cent of the extra conductors had worked 2 years or less.

The following table shows for the Washington Railway & Electric Co. the flat hourly rate of pay in May, 1914, and the rate including the hourly equivalent of the amount allowed in 1914 from the profit-sharing fund. For purposes of comparison the scale of March 11, 1916, is also given.

WAGE RATE OF MOTORMEN AND CONDUCTORS OF THE WASHINGTON RAILWAY & ELECTRIC CO. IN MAY, 1914, AND RATE UNDER SCALE OF MAR. 11, 1916.

Period of service.	Rate of pay per hour, May, 1914.	Number of employees at each rate.				Per cent of employees of specified years of service or less.				Rate per hour, including 1914 profits.	Rate per hour under scale of Mar. 11, 1916.
		Motormen.		Conductors.		Motormen.		Conductors.			
		Reg-ular.	Ex-tra.	Reg-ular.	Ex-tra.	Reg-ular.	Ex-tra.	Reg-ular.	Ex-tra.		
First year.....	\$0.21½	6	97	31	104	2	89	10	95	\$0.22½	\$0.23½
Second to fifth year.....	1.22½	127	10	154	4	44	98	62	99	.23½	.24½
Sixth to tenth year.....	1.23½	77	1	74	1	70	99	87	100	.24½	.25½
After 10 years.....	1.25	91	1	40	.....	100	100	100	.....	.25½	.27
Total and average:											
Motormen, regular..	1.235	301	.....	.....	.....	.....	.....	.....	.....	.....	.....
Motormen, extra....	1.216	.....	109	.....	.....	.....	.....	.....	.....	.....	.....
Conductors, regular.	1.230	.....	.....	299	.....	.....	.....	.....	.....	.....	.....
Conductors, extra...	1.216	.....	.....	.....	109	.....	.....	.....	.....	.....	.....

¹ In addition, employees received an allowance from a profit-sharing fund equivalent to approximately three-fourths of one cent per hour in the calendar year 1914.

The scales shown above have been in effect up to the present agreements.

The Washington Railway & Electric Co. has had a profit-sharing scheme for several years under which employees receive a sum each

year in addition to their wages. The sum has varied from year to year, and, hence, is included in the table given above for this company on the basis of the facts for the year 1914. This profit-sharing fund will be discontinued when the new agreement takes effect. The fund as heretofore administered is briefly described in a circular issued by the company, January 2, 1914, addressed to its conductors, motormen, depot clerks, and starters. The circular reads:

Just a word as to what the profit-sharing plan really is: It was founded on the experience of the year 1911, when 26 per cent of our car earnings (less 4 per cent District of Columbia tax) was paid out for trainmen's wages, accidents, and damages; the company agreeing that should the 26 per cent amount to more than the said wages, accidents, and damages for 1912, the surplus should constitute a profit-sharing fund, and be distributed in cash at the end of the year. Under this plan each one-year man received on January 2, 1913, a check for \$28.72. To-day it gives to the same man \$42.53.

The figures are as follows:

Gross passenger receipts, less District of Columbia tax of 4 per cent.....	\$2, 653, 398
26 per cent appropriated for trainmen's wages and accidents.....	689, 883
Accidents and damages.....	\$105, 303
Disbursed for wages.....	554, 499
	<hr/> 659, 802
Profit-sharing fund.....	30, 081

The 1914 profits distributed January 2, 1915, were \$15,527, with a payment of \$21.17 to each man in service a full year, and proportionate amounts for less than one year of service equivalent to an addition to the rate of wages of about three-fourths of a cent per hour.

The circular issued January 3, 1916, stated that "there is no profit-sharing fund for 1915," and gave the following figures and comment:

Gross passenger receipts, less District of Columbia tax of 4 per cent.....	\$2, 653, 678
26 per cent appropriated for trainmen's wages and accidents.....	689, 956
Accidents and damages.....	\$139, 330
Disbursed for wages.....	558, 023
	<hr/> 697, 353
Deficit.....	7, 397

These are facts. What to do under the circumstances has been a problem. After careful consideration the management decided to appropriate the sum of \$15,527, the same amount as last year, and has directed its distribution in lieu of a profit-sharing fund.

In accordance with the plan announced as operative for 1915, those employees who have gone through the year with a clean record have had added to the amount of their checks the proportion deducted from the share of those who were suspended for violation of rules during the year.

Under this distribution, the payment to men in service one year or more (if not suspended during the year) was \$23.17 and a propor-

tionate amount to men in service less than one year, equivalent to approximately three-fourths of a cent per hour.

Irregularity in the amount of traffic in every city necessitates the operation of more cars at certain hours of the day than at other times. This gives rise to split or swing runs and trippers. Split runs are regular runs composed of two or more periods of duty with an interval or intervals of time between them. Trippers are extra cars put on at rush hours and are generally assigned to extra men; that is, men who are held available for irregular work.

The Bureau of Labor Statistics in its study of working conditions in the street-railway industry gathered data as to hours on duty per day on regular runs and spread of duty, or outside time, in which regular runs were made. Two tables are given below for the regular runs of the two Washington companies in 1914. One table relates to the hours on duty and the other to the outside time; that is, the time between the beginning and the end of the day's work. Trippers are not included in these tables.

NUMBER OF REGULAR RUNS, BY HOURS ACTUALLY ON DUTY.

[The Capital Traction Co. figures are for November, 1914, and the Washington Railway & Electric Co. figures for May, 1914.]

	Capital Traction Co.		Washington Railway & Electric Co.		
	Monday to Saturday.	Sunday.	Monday to Friday.	Saturday.	Sunday.
Number of runs in which the hours of actual duty were—					
Under 10.....	173	214	74	63	100
10.....	6		6	4	3
Over 10 and under 10½.....	24	16	91	83	69
10½ and under 11.....	33	5	69	75	61
11 and under 11½.....	12	2	47	54	25
11½ and under 12.....	6	1	23	25	9
12 and under 12½.....	5		3	10	1
12½ and under 13.....	1			4	
13 and under 13½.....		2		4	
13½ and under 14.....					
14 and over.....				12	
Total.....	260	240	313	324	268
Per cent of runs with over 10 hours on duty.....	31.2	10.8	74.4	79.3	61.6

¹ One 14-14½; one 14½-15.

Entirely apart from the question as to whether the men desired to work the longer hours or were required to do so these tables show that a large percentage of schedule runs required more than 10 hours per day of running or platform time. In the case of the Capital Traction Co. 31.2 per cent of all regular runs from Monday to Saturday required more than 10 hours of running time; Sunday runs were so arranged that 10.8 per cent required more than 10 hours.

The Washington Railway & Electric Co. required more than 10 hours for 74.4 per cent of its regular runs from Monday to Friday; 79.3 per cent of its Saturday and 61.6 per cent of its Sunday regular runs. By the terms of the new agreement 10 hours is to be the maximum of actual running time per day. The 10 hours' working time are to be completed within 16 hours under the new agreement. The table herewith presented shows the "spread of duty" or "outside time" in force prior to the strike of March 5, 1916.

NUMBER OF REGULAR RUNS, BY HOURS WITHIN WHICH COMPLETED.

[The Capital Traction Co. figures are for November, 1914, and the Washington Railway & Electric Co. figures for May, 1914.]

	Capital Traction Co.		Washington Railway & Electric Co.		
	Monday to Saturday.	Sunday.	Monday to Friday.	Saturday.	Sunday.
Number of runs completed within—					
Under 10 hours.....	119	211	14	14	84
10 and under 10½ hours.....	16	16	37	42	50
10½ and under 11 hours.....	24	6	25	27	40
11 and under 11½ hours.....	14	2	14	14	17
11½ and under 12 hours.....	11	1	17	13	18
12 and under 12½ hours.....	9	1	27	27	4
12½ and under 13 hours.....	4	.....	37	43	8
13 and under 13½ hours.....	7	1	30	27	9
13½ and under 14 hours.....	.....	.....	13	12	6
14 and under 14½ hours.....	3	.....	12	10	4
14½ and under 15 hours.....	23	2	7	7	3
15 and under 15½ hours.....	6	.....	6	2	4
15½ and under 16 hours.....	13	.....	8	11	1
16 hours.....	.....	.....	1	.....	.....
Over 16 and under 16½ hours.....	8	.....	9	11	5
16½ and under 17 hours.....	1	.....	16	19	3
17 and under 17½ hours.....	.....	.....	16	17	2
17½ and under 18 hours.....	2	.....	13	14	1
18 hours and over.....	.....	.....	11	14	.....
Total.....	260	240	313	324	268
Per cent of runs with outside time of over 16 hours...	4.2	.....	20.8	23.1	4.1

The Capital Traction Co. scheduled 4.2 per cent of its runs so that more than 16 hours were required to complete the day's work on those runs; though none of their Sunday runs required more than 16 hours. The Washington Railway & Electric Co.'s regular runs from Monday to Friday required more than 16 hours "outside time" in 20.8 per cent of the cases; 23.1 per cent of the Saturday regular runs; and 4.1 per cent of Sunday runs had more than 16 hours of "completed within" or outside time.

It will be noted that the agreement for a maximum of 10 hours work to be completed within 16 hours spread of duty, and 8 consecutive hours of rest will require a somewhat radical revision of the schedule of regular runs.

REGULARITY OF EMPLOYMENT IN OHIO, 1914.

Wages and hours of labor and the steadiness of employment in ordinary wage earning occupations and in commercial and office work have been the subject of an investigation made under the direction of the Industrial Commission of Ohio.¹

This study under review, which was prepared by the department of investigation and statistics, canvassed 14,776 employers in Ohio, who employ 779,929 employees. As a result of the investigation it appeared that on the whole wage earners in manufacturing establishments earned relatively less wages and suffered from more irregularity in employment than did employees in office and commercial positions. This was true of workers of both sexes. Thus less than \$12 per week was the rate of wages for 29.6 per cent of the adult male wage earners, but for only 19.7 per cent of the adult male bookkeepers, stenographers, and office clerks. And as higher wage groups are reached the difference in the proportion of the different classes of employees earning specified wages becomes even more marked. The rate of wages for 56.9 per cent of the adult male wage earners was less than \$15 per week, while only 34.2 per cent of the adult male bookkeepers, stenographers, and office clerks were in that class, and only 36.4 per cent of the adult salesmen; less than \$25 per week was the rate of wages for 94.1 per cent of the adult male wage earners, 77 per cent of the adult male bookkeepers, stenographers, and office clerks, and 79.6 per cent of the adult salesmen.

Remarkable regularity of employment, the report declares, is noted for bookkeepers, stenographers, and office clerks as compared with wage earners. On the other hand, no definite statement can be made as to the relative hours of labor for the different classes of occupation. According to industrial groups it appears, however, that the largest proportion of workers in agriculture, or 56.8 per cent, work 60 hours per week; in construction work the largest proportion, or 48.2 per cent, worked 48 hours and under per week; in manufactories the largest proportion, or 23 per cent, were found employed over 54 and under 60 hours per week; in the general industrial group "service," which includes restaurants, hotels, etc., the largest proportion, or 24.6 per cent, worked 54 hours per week; in those occupations coming under the general term "trade," which includes office and clerical help very largely, the largest proportion of employees within that group, or 28.5 per cent, worked 60 hours per week, while in transportation and public utilities the largest proportion, or 26.8 per cent, worked 54 hours per week.

¹ The Industrial Commission of Ohio. Department of Investigation and Statistics, Report No. 16: Rates of Wages, Hours of Labor, and Fluctuation of Employment in Ohio in 1914. Columbus, Ohio. 317 pp.

The report includes wage data for 779,929 employees, of whom 634,231 are males and 145,698 are females. Of the total number of males 98.4 per cent were 18 years of age and over, and of the females, 95.3 per cent. The number concerning whom information was secured, classified by three principal groups, was as follows:

NUMBER FOR WHOM WAGE DATA WERE SECURED.

Occupations.	Males.	Females.	Total.	Number 18 years of age and over.		
				Males.	Females.	Total.
Wage earners.....	582,031	101,710	683,741	573,245	96,181	669,426
Bookkeepers, stenographers, and office clerks.....	36,710	25,321	62,031	35,382	24,442	59,824
Sales people (not traveling).....	15,490	18,667	34,157	15,169	18,225	33,394
Total.....	634,231	145,698	779,929	623,796	138,848	762,644

In order to ascertain the relative wages of the three occupation groups concerned in the inquiry on the fairest basis the classified earnings of persons 18 years of age and over were ascertained, and are presented in the subjoined table. This table shows quite clearly that the relative earnings of bookkeepers, stenographers, office clerks, and sales people were somewhat better than those of wage earners in the industrial establishments of the State. A relatively lower percentage of the former in all instances earned less than a certain specified amount. The table follows:

PER CENT OF ADULT EMPLOYEES (18 YEARS AND OVER) EARNING LESS THAN SPECIFIED AMOUNTS PER WEEK.

Males.

Classified wages per week.	Wage earners.	Bookkeepers, stenographers, office clerks.	Sales people (not traveling).	Total.
Less than \$10.....	11.7	11.0	11.0	11.5
Less than \$12.....	29.6	19.7	19.0	28.6
Less than \$15.....	56.9	34.2	36.4	54.9
Less than \$18.....	76.0	53.5	56.7	74.0
Less than \$25.....	94.1	77.0	79.6	92.5

Females.

Less than \$6.....	21.4	7.0	20.1	18.7
Less than \$7.....	40.5	14.5	40.5	36.0
Less than \$8.....	58.4	24.1	55.3	52.0
Less than \$9.....	71.7	35.2	67.5	64.8
Less than \$10.....	82.4	45.0	74.8	74.9
Less than \$12.....	92.9	63.9	85.3	86.9
Less than \$15.....	97.9	82.0	92.5	94.5

Returns showing the number of persons employed on the 15th of each month were secured from 14,149 establishments and the results concerning fluctuations in employment were presented according to the three occupation groups adopted throughout the report. The fluctuation in employment was measured by the per cent of variation in the number employed as compared with the maximum month of the year.

The maximum number of wage earners employed in the 14,149 establishments in Ohio in 1914 was 576,394 in April, the minimum was 505,549, reported for December, "which means that if there was a complete exchange of employees between industries and between individual employers, there were 70,845 wage earners, or 12.3 per cent of the maximum number, out of employment at one time."

The maximum of employment for male wage earners was reached in April and the minimum in December, with a variation from the maximum of 13.2 per cent. The maximum of employment for female wage earners was reached in March and the minimum in December, with a variation of 9.3 per cent.

Comparing the results of the fluctuation in number of wage earners employed in manufacture in Ohio, as shown by the United States Census reports of 1910 for the year 1909, with those obtained in the present investigation, there is indicated a substantial agreement. Thus, all industries in 1909, according to the United States Census figures, showed a fluctuation of 13.8 per cent between the maximum and minimum number employed, while the study under review showed a fluctuation of 13 per cent. The canning and preserving industry, according to both reports, showed the largest fluctuation between the maximum and minimum number employed during the respective years—1909 and 1914—being 90.1 per cent according to the census figures and 87.3 per cent according to the investigation under review.

The general results of the Ohio investigation concerning fluctuation of employment are contained in the following table:

MAXIMUM AND MINIMUM EMPLOYMENT OF WAGE EARNERS IN SELECTED IMPORTANT INDUSTRIES IN 1914.

Industry.	Number of establishments reporting.	Male wage earners.			Female wage earners.		
		Maximum number employed.	Minimum number employed.	Variation from maximum (per cent).	Maximum number employed.	Minimum number employed.	Variation from maximum (per cent).
CONSTRUCTION.							
Brick, stone, and cement work.....	266	4,240	1,763	58.4	.....	.....	.....
General contracting.....	682	16,353	7,566	53.7	.....	.....	.....
Street, road, and sewer contracting.....	233	8,504	1,954	77.0	.....	.....	.....
MANUFACTURES.							
Agricultural implements....	41	5,081	2,970	41.5	.....	.....	.....
Automobiles, including bodies and parts.....	72	23,948	18,514	22.7	1,022	600	32.5
Blast furnace products.....	36	4,521	2,959	34.5	.....	.....	.....
Boots and shoes, including cut stock and findings.....	65	9,712	7,367	24.1	6,127	4,582	25.2
Bread and other bakery products.....	269	3,582	3,431	4.2	1,061	960	9.5
Brick and tile.....	212	9,032	5,995	33.6	.....	.....	.....
Canning and preserving fruits and vegetables.....	80	2,714	349	87.1	2,414	278	88.5
Carriages, wagons, and materials.....	200	5,781	4,314	25.4	266	154	39.8
Cash registers and calculating machines.....	6	5,675	4,004	29.4	475	381	19.8
Clothing, men's, including shirts.....	226	3,278	2,831	13.6	6,999	6,039	13.7
Clothing, women's.....	79	2,664	1,880	29.4	4,564	2,967	35.0
Copper, tin, and sheet-iron products.....	146	7,266	6,240	14.1	1,369	1,098	19.8
Cutlery and tools.....	49	4,244	3,141	26.0	341	258	24.3
Electrical machinery, apparatus and supplies.....	61	6,465	5,612	13.2	1,009	667	33.9
Foundry and machine shop products.....	778	64,760	54,115	16.4	822	674	18.0
Furniture and refrigerators..	157	10,386	8,483	18.3	476	392	17.6
Gas and electric fixtures and lamps and reflectors..	38	3,265	2,663	18.4	2,964	1,957	34.0
Glass.....	36	10,373	6,267	39.6	933	570	38.9
Hosiery and knit goods.....	39	812	648	20.2	3,459	2,768	20.0
Liquors, malt.....	111	5,885	4,708	20.0	.....	.....	.....
Lumber and planing mill products.....	433	10,262	8,373	18.4	.....	.....	.....
Paper and wood pulp.....	44	4,209	3,797	9.8	609	538	11.7
Pottery, terra cotta, and fire clay products.....	144	13,491	11,854	12.1	2,301	2,111	8.3
Printing and publishing....	636	12,070	11,625	3.7	3,705	3,259	12.0
Rubber goods.....	41	22,500	16,595	26.2	2,646	2,048	22.6
Steel works and rolling mills	63	49,381	33,418	32.3	.....	.....	.....
Stoves and furnaces.....	90	8,008	6,818	14.9	.....	.....	.....
Tobacco manufactures.....	209	4,397	3,803	13.5	9,430	8,342	11.5
SERVICE.							
Hotels.....	166	3,467	3,288	5.2	2,054	1,979	3.7
Laundries and dry cleaners.	237	2,225	2,127	4.4	4,767	4,326	9.3
TRADE.							
Retail and wholesale stores..	2,708	17,010	16,231	4.6	5,190	4,133	20.4
TRANSPORTATION AND PUBLIC UTILITIES.							
Electric railroads.....	58	14,177	11,605	18.1	.....	.....	.....
Natural gas.....	50	4,820	2,494	48.3	.....	.....	.....
Telegraph and telephone....	297	3,894	3,231	17.0	6,252	5,860	6.3

The report notes that the total figures for any single industry do not show fully fluctuations of employment, because a decrease in the number employed in any one industry may be offset by an increase in the number employed in another industry, and because it may or may not be possible for employees to pass with facility from one industry to another.

To show what may be disclosed as to fluctuations in employment there was made a more detailed analysis of the reports received from a limited class of establishments, and as a result there was found a considerable variation in the number employed in the course of the year. Thus the per cent of variation from the maximum number employed was 64.1 per cent in the case of male wage earners engaged in fertilizer manufacture and 32.3 per cent for those engaged in steel works and rolling mills; in clothing manufacture the variation was 29.4 per cent for male wage earners and 35 per cent for female wage earners. On the other hand, remarkable regularity of employment is noted for bookkeepers, stenographers, and office clerks as compared with wage earners. For bookkeepers, stenographers, and clerks the variation was 2.6 per cent for males and 1.8 per cent in the case of females. The number of salesmen showed a variation of 4.8 per cent and saleswomen a considerably higher variation, or 26.9 per cent.

COLLECTIVE BARGAINING IN THE ANTHRACITE COAL INDUSTRY.

Collective bargaining in the anthracite coal industry furnishes a striking example of the possibility of trade agreements and the peaceful settlement of labor disputes between a group of employers strongly united and a body of unskilled workers composed largely of recent immigrants inexperienced in collective action and untrained in American unionism. The basis for this development was established in the short period beginning with the strike of 1900 and ending with the arbitration of the Anthracite Coal Strike Commission in 1902-3. Out of this has grown a well-developed form of collective bargaining and an unusually efficient system of conciliation and arbitration of disputes.

The anthracite coal industry is peculiar in several respects: (1) Nearly all of the anthracite coal production of the United States is confined to five counties of Pennsylvania. (2) It is concentrated in its financial control. Seven large mining companies, which have been under the ownership and control of the anthracite coal-carrying railroads, and united in a community of interest which has been dominated by a group of financial interests in New York City,

produced over half of the anthracite coal and purchased the output of a large proportion of the independent operators. (3) The evolution in coal consumption has tended to give anthracite a market free from direct competition with bituminous, except in certain small sizes. (4) In spite of the geographical and industrial concentration of the industry, conditions of work differ greatly because of the pitch of the tunnels, the size and direction of the veins, the proportion of slate and sulphur in the coal, the methods of mining, etc., necessitating unusually elaborate systems of differential rates of pay.

The conditions under which collective bargaining was introduced and has been carried on in the anthracite field possess some features which are of special interest. Opposed to a highly concentrated control of the industry on the employers' side has been a mass of workers which had become more and more heterogeneous from the standpoint of race and nationality. A change in the racial composition of the mine workers occurred during the same period in which the concentration in the control of the industry was consummated. The introduction of the collective bargaining principle in their industrial relations came at the time when the employers were perhaps most united and the employees least homogeneous. The manner in which the trade agreement was established in the anthracite field was fundamentally different from the manner in which it was established in the bituminous industry. In the latter the trade agreement was the outgrowth of the efforts of the operators and miners themselves to settle their differences, and these efforts had extended over a long period of years. In the former the trade agreement was forced upon the operators by a body of workers, powerfully aided by popular opinion, in a very short period of time. The creation of a permanent board of conciliation for an entire industry as a method of settling disputes arising under agreements and of preventing strikes was unique, and the provisions for the adjudication of such disputes as could not be settled by conciliation by an umpire appointed by a Federal judge was a step far in advance of what had been done in the coal industry in this country, as well as in other industries of a national scope.

In spite of the fact that on three occasions—in 1906, 1909, and 1912—when new agreements were negotiated, obstacles in the way of maintaining peaceful relations appeared to be serious, the relations between employers and employees have been maintained without a break. Although there have been elements and factors which naturally would seem to be peculiarly unfavorable to collective bargaining and the preservation of industrial peace, a habit of collective bargaining has been established, fairly well recognized precedents in

the manner of negotiating agreements have grown up, and a system of settling disputes and grievances, which has so far been successful in continuing and furthering peaceful relations and avoiding conflicts, has been developed.

The development of a system of collective bargaining in the anthracite coal industry and the results secured may be briefly summarized. The earliest attempts on the part of mine workers, beginning in 1848 and continuing until 1888, to secure a permanent basis for trade agreements were unsuccessful. From 1888 until 1900 no further attempts were made. In 1899 the United Mine Workers of America entered the anthracite field and began organizing the mine workers, and in the following year the first great strike occurred, which resulted in a wage increase and certain other concessions from the operators. The 1900 strike was a preliminary struggle, in the sense that it enabled the union to increase its strength in the anthracite fields and to educate the mine workers in unionism. In 1902 the second great strike occurred, which had for its main object the recognition of the United Mine Workers of America and the making of a trade agreement. As in the case of the 1900 strike, the operators were forced by public opinion as well as by other considerations to recede from their position of refusing to make any concessions, and in the fall of 1902 they agreed to arbitration by a commission appointed by the President of the United States. This body, the Anthracite Coal Strike Commission, announced its awards early in 1903. The awards provided for certain wage increases, reductions in hours, and changes in other working conditions, and for a system of conciliation and arbitration of disputes arising during the period of three years for which the awards were to be in force. The commission contemplated in its plan of conciliation and arbitration, as well as in its findings in general, the establishment of a permanent basis for better relations between employers and employees in the industry. Its work apparently laid such a foundation, as subsequent history of industrial relations in the anthracite field has so far shown.

In the three agreements that have been made in the industry since the expiration of the awards in 1906 several tendencies appear. While the principal issues of wages, hours, recognition of the union, and questions connected with the presence of a union and methods of settling disputes have been brought up in each series of negotiations, there have been: (a) A tendency to amend the awards of 1903 with more freedom in each agreement; (b) a tendency toward more businesslike methods in negotiations and toward a better understanding between the representatives of the bargaining parties; (c) a tendency to grant more complete recognition of the union as a party to agreements. On only one occasion (in the agreement of

1912) has an increase in wages been stipulated, and the provisions of the agreements have, in so far as they have gone beyond a mere continuance of the 1903 awards, related principally to methods of settling disputes and grievances.

The system of settling disputes and grievances provided by the awards of the Anthracite Coal Strike Commission has been considerably modified by adding machinery for the conciliation of disputes at the collieries where they occur and in the districts in which the collieries are located. The most important change of this character was the provision in the 1912 agreement for local or colliery "grievance committees" to represent the workers at any mine in dealing with the mine boss or superintendent. These changes have had the effect of affording experience and education to the mine workers in collective action, of strengthening the union, and of allowing a larger number of grievances to be aired and settled. The matters arising for settlement have exhibited a tendency to become more important in their character. While there has been complaint of delay in settlements, the system of conciliation appears to have worked efficiently, and there have been practically no instances of repudiation of the settlements or of the decisions. The method of referring to umpires matters on which settlement by means of conciliation could not be made, as provided by the Anthracite Coal Strike Commission's awards, has been so successful that no suggestion of change has been made. In the settlement of disputes a great majority of the settlements and decisions have been interpretative in their character; but where it has been necessary, the board of conciliation has not hesitated to make settlements which were essentially amendments of the awards and of the agreements, and such settlements have been upheld in the decisions of umpires.

The success of the agreements, judged from the standpoint of collective bargaining, is seen in the fact that at no time has there been any repudiation of any agreement. A number of infractions have occurred in the form of local strikes, arising because of hasty group action on grievances and because of efforts to compel nonunion workers to become members of unions. The local grievances strikes have been much more rare than the "button strikes," and have been discountenanced by union officials as well as by the operators. The success of the agreements appears also to be indicated in the attitude of mine workers and operators; while both parties have expressed dissatisfaction with certain features of the agreements and of the system of conciliating disputes and grievances, the principle of collective bargaining is looked upon favorably by many representative operators as well as by union officials.

The measure of authority attached to the awards of the Anthracite Coal Strike Commission has been a factor in the enforcement of the

agreements which is not without its importance. Much of the respect in which its awards have been held has been undoubtedly due to its singularly effective work and to the fact that it marked the end of a struggle whose memories are unpleasant to both sides even to-day, but a great deal of the reverence for its decisions in 1903 has been due to its governmental character. The fact has not been forgotten that it was a body named by the President of the United States. Naturally there has been a tendency, which has been pointed out in the foregoing pages, to amend and add to the awards and to take away some of their constitutional character; yet they have performed the service of a constitution at a time when such service was perhaps of vital importance. Only as the habit of peaceful relations has grown has the usefulness of the awards as a constitution of industrial relations become less important and necessary.

With the successive agreements the employees have made important gains in wages, hours, and conditions of employment. Since 1900 there have been three horizontal increases in the rates of wages. Each of these increases have been of 10 per cent, applying to all employees except in one instance in 1903, in which a 5 per cent increase only was granted for one small group of employees. These increases were secured in 1900, 1903, and 1912. The first was the result of the strike of 1900, the second of arbitration by the Anthracite Coal Strike Commission, and the third of a joint agreement. In addition to this the 1903 award provided for a sliding scale with the rates existing in 1902, plus the horizontal increase, as a minimum.

The awards of 1903 contained four distinct provisions affecting wages, relating to: (1) Horizontal increases; (2) retroactive effect of increases; (3) shortened shifts; and (4) the sliding scale. As the result, contract miners received an increase of 11.1 per cent. Taking into account employees paid on a time basis, the results were: Water-hoisting engineers and firemen received an increase in hourly rate of 50 per cent, other engineers and pump men an increase in hourly rate of 22.5 per cent, and company men an increase in hourly rate of 25 per cent. It was estimated that this wage advance a little more than compensated for the increase in prices of food and other articles of consumption in the anthracite field since 1900, the cost of living being 10 per cent higher in 1903 than in 1900 and 6 per cent higher than in 1901.

The average per cent of increase received by the mine workers under the sliding scale during the nine years of its existence, from 1903 to 1912, was 4.2 per cent above the wages as increased by other provisions of the 1903 award. The 1912 agreement provided that the contract rates and wage scales for all employees should be increased 10 per cent over and above the contract rates and wage

scales established by the Anthracite Coal Strike Commission in 1093, and that the sliding scale should be abolished. The net effect of this provision was to increase the average wages of all workmen 5.6 per cent above the wages paid in 1911.

The only provisions relating to hours in any of the agreements and other stipulations resulting from collective bargaining in the anthracite field since 1900 were contained in the 1903 awards, although the mine workers have consistently demanded an eight-hour day for all time workers in the making of subsequent agreements. The 1903 award provided for eight-hour shifts for water-hoisting engineers; Sundays off for hoisting and other engineers and pump men, other than those employed in hoisting water; eight-hour shifts for firemen; nine-hour day for all company employees on time basis, with same pay as for the former ten-hour day, and overtime in excess of nine hours. This meant that for engineers, pump men, and firemen a uniform eight-hour shift was provided, since these positions were such as required continuous manning. For other time employees of the company the nine-hour day was to prevail so far as the rate of pay was concerned. In practice these employees could be kept at work as long as the employers wished at overtime rates, which were no higher than the regular rates. It was claimed, although the award had been in operation for over a year, that the nine-hour day was no shorter and no more profitable than the former ten-hour day.

The demand for an eight-hour day for all work connected with the mines has until recently been based on the usual reasons given by labor unions. Since the new reason for this demand may throw light on future agreement making, it may be well to state it here. While the development of narrower veins of coal, imposing more arduous working conditions upon miners and reducing their earning capacity, has been urged in support of demands for shorter hours and higher rates of pay, the installation of a new coal-cutting machine since the 1912 agreement was signed is put forward as additional ground for the eight-hour day demand. In the Scranton or northern field, it is asserted, certain operators are working veins varying from $2\frac{1}{2}$ to 3 feet in thickness. The new coal-cutting machine which has been introduced takes out the coal, after driving the gangways, without removing the bottom layer of rock. The miners employed in these chambers are compelled to work in extremely cramped and uncomfortable positions and the laborers who load the coal must move about on their hands and knees. The payment of these miners and their laborers on an eight-hour day time basis instead of by the ton is now urged.

The degree in which the maintenance of discipline has been affected by trade agreements and by the development of the principle of

collective bargaining is, of course, a matter of opinion on the part of those who provide and enforce regulations and of those who are expected to obey them. The point of view of each side, therefore, must be taken into consideration.

The right of the employer to maintain discipline in the operation of his mine was clearly and definitely recognized by the Anthracite Coal Strike Commission. The question of discipline had been emphasized by the operators before the commission by urging that recognition of the union would endanger the discipline necessary and proper to the efficient operation of the mine. "The union must not undertake to assume, or to interfere with, the management of the business of the employer," said the commission in its report in discussing the proper attitude of a union in order to be recognized. Again, in referring to discrimination by either the employer or the workers, lawlessness, boycotting, and blacklisting, the commission said: "There is no industry in which discipline is more essential than in mining. The hazardous nature of the work calls for the best discipline; it is to the interest of the employer and employee to see that it is maintained. Each should aid the other in establishing the best methods not only for securing discipline, but in preserving it. Discrimination and interference weaken all discipline." Only two of a number of cases, involving the question of discharge as a means to enforce discipline, coming up before the board of conciliation were acted upon, and on both of these the union and employer members deadlocked, the cases, therefore, going to umpire. In both of these cases the right of the employer to discharge an employee for breaking colliery regulations was upheld, although in both instances the employers were censured by the umpire for the manner in which the employee was treated, on the ground that the spirit of the award, i. e., the preservation of peace between employer and employee, was not observed, and in one case on the additional ground that punishment had been too severe.

While no specific provisions appeared in the 1903 awards or in the subsequent agreements relating to the maintenance of discipline, it is evident that the Anthracite Coal Strike Commission's idea, which was later upheld in the decision of umpires, was that, while the employer had the right to enforce discipline, even to the extent of suspending or discharging the offending employee, the cause of discipline could best be served by cooperation between employer and employee rather than by an exhibition of domineering authority on the employer's part or of assumption of unwarranted "rights" on the employee's part.

The point of view of the employer as regards the meaning of discipline and the method of enforcing it has undergone some modi-

fication since 1900. A canvass of representative mining company superintendents, who come into daily contact with conditions, shows that while they believe the necessary discipline has been weakened by the results of collective bargaining, they are inclined to have greater confidence in the ability of the mine workers' organization to cooperate with them in the future.

Taking the operators as a whole, however, while they believe that dealing with any organization of employees is detrimental to discipline, particularly through local grievance committees, the maintenance of discipline under conditions where trade agreements exist is a matter of education of the worker. They are gradually feeling a greater confidence in the ability of the union leaders to understand the difference between questions affecting recognition, wages, hours, and conditions of labor and regulations for the efficient and safe conduct of the colliery, and those affecting the education and control of the untutored and raw worker in the mine. Perhaps it is not too much to say that the average operator has had to learn to see this difference himself.

The question of discipline, involving, as it does, the entire question of the operator's authority, goes to the heart of the problem. Upon the success of the maintenance of discipline under conditions of collective bargaining largely rests the success of collective bargaining itself so far as the operator is concerned. That there has been great progress made in the anthracite field there can be little doubt. The operators have more confidence in the union officials; the union realizes its own responsibility more than ever before; the substitution of the cooperative spirit for the old condition of master against worker is perceptible; and there is a very evident disposition on the part of the employer to trust the union still further as the union is able to control the heterogeneous elements that comprise its membership.

REPORT OF THE COLORADO COAL COMMISSION.¹

In 1914 the President appointed a commission to report upon the labor difficulties in the coal fields of Colorado during the years 1914 and 1915. The commission consisted of Seth Low, of New York City; Charles W. Mills, of Philadelphia; and Patrick Gilday, of Clearfield, Pa. This commission submitted its final report under date of February 23, 1916.

The report is very brief, containing merely a summary of findings, based for the most part upon a personal visit of the commission to

¹ Report of the Colorado Coal Commission on the labor difficulties in the coal fields of Colorado during the years 1914 and 1915, House Doc. No. 859, 64th Cong., 1st sess.

the Colorado coal fields. In scope it is concerned primarily with conditions in the coal fields as they existed after the strike disturbances.

In its survey of conditions growing out of the strike, the commission emphasizes two factors as of particular importance: The creation of the Colorado Industrial Commission, with extensive authority in industrial disputes, and the plan of the Colorado Fuel & Iron Co.¹ for regulating the relations between the corporation and its employees. The Colorado Industrial Commission, under its creative act, is given the power of compulsory investigation of labor disputes, and for a period of 30 days during which the investigation is pending, strikes or lockouts are forbidden under penalty.

Particular attention was devoted by the commission to the operation of the industrial representation plan of the Colorado Fuel & Iron Co. Its conclusion is that the plan was adopted by the company "in entire good faith and is being operated with a single-hearted desire to make it successful." The opposition of organized labor to the plan is noted and commented upon as follows:

It must be said that there is no effort being made on the part of the organization to ascertain whether the company is acting in good faith or not. Their contention that the miners are not free under the industrial plan to express their real opinions and that they dare not avow their membership in the union could readily be tested if one of their representatives would express his real opinion and any action were taken by the company against such individual. Your commission, upon hearing the complaints to the effect that a member of their organization would be promptly discharged if he made his membership known to the foreman or his associates, endeavored to have some individual follow this course in order that your commission might discover if there was any real discrimination on account of membership in the organization, but we were unsuccessful in getting any of the leaders with whom we conferred to agree to such a course unless we would guarantee that anyone doing so would not lose his place. That, evidently, was not our province, neither was it in our power to do.

The charge of discrimination against former strikers is not regarded as well founded by the commission. Its conclusion is that such discrimination exists in some degree in the northern field, but little if at all in the southern field. Referring to the fear of discrimination on the part of miners in the southern field, the report says: "Your commission is under the impression that the fear said to be entertained by the miners, so far as the companies are concerned, is probably exaggerated and is an imaginary fear rather than a real fear."

The commission speaks very favorably of the general living conditions of the miners: .

The housing conditions for the miners are exceptionally well provided, and every camp that we saw appeared to be doing much for the comfort and welfare of its employees. Bathing houses are provided in some instances free and in some instances operated for a charge of \$1 per month. If there is any charge, the attendant looks after washing

¹ For an analysis of this plan see the REVIEW for December, 1915, pp. 12-22.

out the clothes and hanging them up to dry and keeping the place in order. Many of the camps have clubhouses with pool tables, a reading room, and various games for the enjoyment of the members, and all of the clubs are free for the use of the employees.

Schools are maintained for the benefit of the children of the miners. In some instances these schools are provided by the company, at least to the extent of furnishing the building for the same, though the instruction is paid for by the county. In every instance, however, the school is within easy walking distance, if not in the center of the town or camp.

As regards the indictment and imprisonment of striking miners, the report comments as follows:

Your commission became aware of only one disturbing element in the industrial situation. About 400 indictments were found after the strike, and all of these were of strikers. Some of the citizens of Colorado believe that many illegal acts were committed on the part of the operators, and the justice which finds all of the indictments on one side does not seem to them even-handed. Your commission naturally expresses no opinion as to the correctness of this belief. It simply calls attention to the existence of this feeling.

Again, it is believed by some, even among the operators, that in many of these cases the State has not sufficient evidence to convict. In such cases—and your commission believes that there are such—the men affected are suffering from great injustice, in that they are either confined in jails, unable to get bond, or if out on bond they are refused employment in Colorado on account of the indictment against them, and are prevented from leaving Colorado or the jurisdiction of the court by their bondsmen. As long as this condition of affairs exists the industrial health of Colorado will be weakened by this festering sore. It is not the business of your commission to weigh the rights and wrongs of the case, but we should fall short of our duty if we did not call attention to this feature of the situation and emphasize the importance to the State of providing a prompt remedy.

RETAIL PRICES OF FOOD IN THE UNITED STATES.

Reports to the Bureau of Labor Statistics from approximately 725 retail dealers in 44 of the principal industrial cities of the United States covering the principal staple articles show that for the month from December 15, 1915, to January 15, 1916, the price of food, taken as a whole, made no change. As to the articles considered separately, practically all meats advanced slightly in price. The most marked changes which occurred during the month were in potatoes, which advanced 28 per cent; in onions, which advanced 16 per cent, and in eggs, which declined 9 per cent.

A table showing relatively the retail prices of food on December 15, 1915, and on January 15, 1916, is given herewith. The relative numbers shown are simply percentages in which the average price for the entire year 1915 is taken as the base.

RELATIVE RETAIL PRICES OF FOOD ON DEC. 15, 1915, AND JAN. 15, 1916.

[Average price for the year 1915=100.]

Articles.	Dec. 15, 1915.	Jan. 15, 1916.
Sirloin steak.....	98	100
Round steak.....	98	99
Rib roast.....	99	100
Chuck roast.....	98	99
Plate boiling beef.....	98	99
Pork chops.....	91	93
Bacon, smoked.....	101	101
Ham, smoked.....	103	104
Lard, pure.....	98	99
Hens.....	98	104
Flour, wheat.....	91	95
Corn meal.....	99	99
Eggs, strictly fresh.....	137	124
Butter, creamery.....	108	107
Potatoes, Irish.....	120	153
Sugar, granulated.....	103	102
Cheese.....	102	105
Rice.....	100	100
Beans.....	114	117
Coffee.....	100	100
Tea.....	100	100
Salmon.....	100	100
Onions.....	101	117
Prunes.....	98	98
Raisins.....	100	101
Milk.....	100	101
All articles combined.....	106	106

The following table shows the relative retail prices of food on January 15 of each year from 1912 to 1916, with the average for the year 1915 taken as the base or 100:

RELATIVE RETAIL PRICES OF FOOD IN JANUARY OF EACH YEAR, 1912 TO 1916, AS COMPARED WITH AVERAGE PRICES FOR THE YEAR 1915.

[Average price for the year 1915=100.]

Articles.	January—				
	1912	1913	1914	1915	1916
Sirloin steak.....	81	93	98	99	100
Round steak.....	77	89	99	99	99
Rib roast.....	84	93	99	99	100
Chuck roast.....			103	101	99
Plate boiling beef.....			101	102	99
Pork chops.....	84	92	102	92	93
Bacon, smoked.....	86	94	98	101	101
Ham, smoked.....	89	96	101	101	104
Lard, pure.....	92	104	107	104	99
Hens.....	92	97	102	98	104
Flour, wheat.....	82	80	78	99	95
Corn meal.....	90	91	96	100	99
Eggs, strictly fresh.....	129	110	128	131	124
Butter, creamery.....	120	114	111	108	107
Potatoes, Irish.....	164	103	122	95	153
Sugar, granulated.....	102	89	79	91	102
Cheese.....				100	106
Rice.....				100	100
Beans, navy.....				93	117
Coffee.....				100	100
Tea.....				100	100
Salmon, canned.....				100	100
Onions, yellow.....				98	117
Prunes.....				101	98
Raisins, seeded.....				100	101
Milk, fresh.....	98	101	103	101	101
All articles combined.....	97	97	102	101	106

As shown by the preceding table, the price of food, taken as a whole, from January, 1912, to January, 1913, made no change, but from January, 1913, to January, 1914, the price of food advanced 5 per cent. Between January, 1914, and January, 1915, there was a decrease of 1 per cent, but by January, 1916, there was an increase of 5 per cent over January, 1915, an advance as great as between January, 1913, and January, 1914, making the advance 9 per cent in the four years from January, 1912, to January, 1916.

In the year from January, 1915, to January, 1916, there was a slight advance in the price of most meats, but the two cheaper cuts, chuck roast and plate boiling beef, declined in price. The most noticeable changes occurring during this year were advances of 61 per cent in potatoes, 26 per cent in beans, 19 per cent in onions, and 12 per cent in sugar.

PRICES AND COST OF LIVING IN CANADA.

On August 1, 1914, the board of inquiry into the cost of living in Canada, which had been appointed December 20, 1913, submitted its report to the Prime Minister of Canada.¹

This is a comprehensive report of two volumes and consists of a compilation and discussion of existing material in official, semi-official, and private publications regarding prices and cost of living in Canada. It covers a series of years and terminates, generally speaking, with the year 1913, but contains some data for the year 1914.

The board used data from practically all aspects of economic development capable of quantitative or statistical measurement and having a bearing upon the problem in hand. The available official statistics of wholesale and retail prices for foreign countries were utilized by the board for purposes of comparison with the movement in Canada, generally for the period 1900 to 1913. Among the topics considered in Volume I were the following: Movement of population from the land; standard of living (necessities and luxuries); industrial efficiency; adulteration and inspection of staple commodities; waste and extravagance; uneconomical household expenditures; rents, houses, town planning; public utilities; land speculation; cold storage; monopolies, industrial combinations, mergers, and trusts; lumber and other building material; amount and value of produce and prices of clothing, leather, rubber, boots and shoes, cereals, flour and bread, fish, live stock, meats, dairy products, etc.; cooperation; markets and marketing; stockyards, refrigeration; mixed farming and land settlement; agricultural credit, regulation of industry (bureaus

¹ Board of Inquiry into Cost of Living: Report of the Board, Ottawa, 1915. 2 vols. (Vol. I: 955 pp.; Vol. II: 1108 pp.)

of information, unemployment); customs tariff; gold production, supply and demand.

Volume I contains the principal report of the board, while Volume II is a supplementary report prepared by Mr. Coats, of the Department of Labor and the member of the board who did not sign the first volume of its report. Under a separate title,¹ Mr. Coats sets forth under the two heads of "the facts" and "the causes" his views on the rise in prices and the cost of living in Canada on the basis of material furnished by the Department of Labor (statistical branch). Part of the material is also found in Volume I of the board's report in the form of appendices. A summary of Volume II is also published separately.²

The conclusions of the board may be set forth very briefly. The board is of the opinion that the principal factor in the increase in prices has been the relatively large increase in the supply of gold in all the leading commercial nations since 1897. Among other causes which have increased the cost of living have been the enormous expenditures on railways and public works and large investments in nonproductive lines; manifold forms of wastage, public and private, individual and social; expenditure on a large scale for luxuries; wasteful methods in the household; restrictions in the supply of commodities as a result of the withdrawal of population from the land and the consequent decreased proportion of persons engaged in producing the food supply; uneconomic methods of distribution; concentration of population in cities, thereby increasing the proportion of nonproducing food consumers; and a general advance in the standard of living.

The remedies suggested by the board are the encouragement of land settlement; greater attention to mixed farming; increased production, with standardization and improvement of quality in farm products and by the adoption of the principle of cooperation in their distribution; extension of the parcel-post system and the making of good roads, thereby reducing the cost of producing the staple farm products; cheaper and more accessible working capital for the farmer; and, finally, vocational training to promote and maintain industrial efficiency.

It may be interesting to note that the board advocates municipal ownership of all public utilities in cities and towns.

¹ *The Rise in Prices and the Cost of Living in Canada, 1900-1914.* A statistical examination of economic causes. (Prices of commodities, wholesale and retail; prices of services; rents; wages; prices of securities; interest; monetary conditions; capital; labor; production; distribution; the standard of living.) Exhibit by the Statistical Branch, Department of Labor. Prepared under direction of R. H. Coats, member of the board of inquiry. Laid before the Board of Inquiry into the Cost of Living, 1915. [Ottawa, 1915.] 1108 pp.

² *The Rise in Prices and the Cost of Living in Canada, 1900-1914.* A statistical examination of economic causes. Synopsis of exhibit by the statistical branch, Department of Labor. Laid before the Board of Inquiry into the Cost of Living, 1915. Ottawa, 1915. 83 pp.

It is generally agreed that during the past 15 years there has been a rise in the cost of living in Canada of approximately 50 per cent. The wholesale prices of 272 representative articles have risen 48 per cent since 1900; and retail prices of over 30 articles of domestic consumption have advanced approximately 40 per cent. Rents increased 60 to 70 per cent. It is also agreed that the rise in prices has been a world-wide phenomenon. "Averaging the returns for the nine leading countries of Europe, together with Japan, Australia, New Zealand, the United States, and Canada—14 in all—the rise in wholesale prices has been about 24 per cent, and in retail about 31 per cent." This increase in prices has differed considerably in extent in the different countries, and different commodities and groups of commodities have responded in varying degrees.

In analyzing the situation, like the board, Mr. Coats appears to see the effect of the increased production of gold upon the general level of prices, but he lays more emphasis on the actual situation as regards production in Canada, which has been drawn "at an exceedingly rapid pace into the world trade scheme as a source of supply for raw materials, particularly cereals." "Around this hinges a general scheme of economic progress in Canada during the last 12 years, and in its various manifestations are to be sought perhaps three-fourths of the explanation of the course that has been followed by prices."

This generalization he arrived at as a result of the statistical examination of the growth and distribution of capital between 1900 and 1914. During the period 1900 to 1910 the proportion between the capital equipment of the primary industries of agriculture, fishing, and mining and the secondary industries (railways, canals, factories, municipalities, public works) changed from 4 to 1 to 5 or 6 to 1. The absorption of outside capital since 1900 has been nowhere more rapid than in Canada.

The second active agent of production, namely labor, has taken the same direction of increase. Thus, the population from 1900 to 1910 increased 35 per cent (45 per cent to 1913), a rise more rapid than that of any other country. A similar increase has taken place in the volume of production within the basic industries.

In the field of distribution the addition of distributive costs following an enlargement of the areas in which demand and supply are equalized has been the great factor at work. And, finally, there is noted a rise in the standard of living as indicated by increased per capita consumption of the common foods, increased use of luxuries, and increased social expenditures directed toward a higher standard of living.

The so-called causes of the rise in prices, namely, expensiveness of business methods, extravagance, the existence of the middleman,

mergers, and big business, customs duties, decline in municipal markets, increasing use of cold storage, higher wages, strikes, land speculation, wars, and militarism, etc., are phenomena in the main incidental; "they are not the tide—they are rather waves upon the tide—and explanations of the rise in prices should not treat them as fundamental." On the contrary, "the great rise in prices that has taken place in Canada is accordingly found to center largely in the new distribution problem which has been created by the lessening of local food supply during an era of heavy expenditures on capital account."

The only course, therefore, suggested by Mr. Coats as a relief against high prices lies in increasing the productive power of the country, placing a larger proportion of the population in the basic or extractive industries of the country.

RECENT REPORTS RELATING TO WORKMEN'S COMPENSATION AND INDUSTRIAL ACCIDENTS.

ILLINOIS.¹

The second annual report of the industrial board of Illinois deals largely with workmen's compensation. It is a pamphlet of 39 pages giving the report of the operations of the board up to June 30, 1915. Following an introductory chapter summarizing the board's activities and presenting nearly 4 pages of general rules adopted by that organization, the work of the year is given in the individual reports of the secretary, security department, arbitration department, and statistical department.

Employers in Illinois are compelled to secure the payment of compensation to the employee. The act provides four methods of security, and it is optional with the employer which method he shall elect. They are as follows: (1) By carrying his own risk, (2) by filing a bond, (3) by insuring, and (4) by some other method approved by the board. The work of the security department is to pass upon applications received under each method and when an insurance policy is allowed to expire the security department immediately makes a demand upon the employer either to renew his insurance or furnish security by one of the methods enumerated in the act. Up to the date of the report 201 employers had furnished proof of financial ability to carry their own risk, while 17,688 were protected by workmen's compensation insurance policies. Thirteen hundred and eighty-nine had not complied with the demand of the department to elect one of the foregoing methods of paying compensation.

¹ Illinois: Second annual report of the industrial board, June 30, 1915. Springfield, 1915. 39 pp.

The secretary's report includes a financial statement of the board for the period July 1, 1913, to June 1, 1915, of which the following is a summary:

SUMMARY OF FINANCIAL STATEMENT OF THE BOARD FOR PERIOD JULY 1, 1913, TO JUNE 1, 1915.

Items.	Appropriated.	Paid out.	Balance.
Original appropriation (July 1, 1913, to June 1, 1915):			
Secretary and clerk hire.....	\$15,600	\$15,600.00	.....
Furniture and office expense.....	6,000	6,000.00	.....
Fees, arbitration agents, medical examiners, and attorney.....	16,000	16,000.00	.....
Traveling expenses of members, etc.....	15,000	2,691.31	\$12,308.69
Office rent.....	3,000	3,000.00	.....
Total.....	55,600	43,291.31	12,308.69
Emergency appropriation (Apr. 1, 1915, to June 1, 1915):			
Incidental expenses.....	8,685	3,687.65	4,997.35
Medical examiner, clerks, stenographers, etc.....	21,180	3,160.46	18,019.54
Total.....	29,865	6,848.11	23,016.89
Grand total.....	85,465	50,139.42	35,325.58

Applications for adjustment of claims filed with the arbitration department numbered 2,314, and the total compensation awarded to date amounted to \$1,590,041. The average amount allowed in fatal cases was \$2,081.77.

The work of the statistical department extended over only six months of the year, since it was not formally organized until January, 1915. However, the tabulations include all compensable accidents; that is, those extending over six days, which occurred from January 1, 1914, to June 30, 1915. The following table presents a summary of all compensable accidents reported during this period, showing the amount of compensation and medical and hospital benefits paid:

SUMMARY OF ALL COMPENSABLE ACCIDENTS REPORTED DURING THE PERIOD JAN. 1, 1914, TO JUNE 30, 1915, SHOWING AVERAGE BENEFIT PER ACCIDENT.

Kind of accident, all industries.	Six months ending June 30, 1914.					Year ending June 30, 1915.				
	Number of accidents.	Compensation paid.	Medical and hospital service.	Total benefits.	Average per case.	Number of accidents.	Compensation paid.	Medical and hospital service.	Total benefits.	Average per case.
Fatal.....	53	\$113,065	\$1,357	\$114,422	\$2,158.90	73	\$165,031	\$912	\$165,943	\$2,273.19
Nonfatal.....	7,134	341,094	77,921	419,015	58.73	12,167	390,589	102,804	493,393	40.55
Total.....	7,187	454,159	79,278	533,437	74.22	12,240	555,620	103,716	659,336	53.87

The report includes other tables showing for each branch of industry the fatal and nonfatal accidents from January 1, 1914, to June 30, 1915, by counties, occupation, sex, conjugal condition, average wage and average age, and by cause and nature of injury for the year ending June 30, 1915.

KENTUCKY.

Following the action of the court of appeals holding unconstitutional the compensation law enacted by the legislature of that State in 1914, a voluntary commission was formed by persons interested, representing the State federation of labor, the manufacturers' and shippers' association and the mine owners' association of the State, and the attorney general's department. This commission has submitted a report with the draft of a bill for the consideration of the State legislature now in session.

The report presents, first, a brief account of the circumstances leading up to its organization, including the grounds on which the earlier law was declared unconstitutional. The desirability of a compensation law for the State was assumed, the only question being the form necessary to satisfy the constitution, and the provisions, adequate but not burdensome, for relief and administration.

The difficulty with the earlier act, as set forth by the court, was in brief that though elective in form the presumption of election by the employee in case the employer elected was a deprivation of rights, that the abrogation of defenses where employers rejected the provisions of the act made it in effect compulsory, and that these and other provisions of the act violated section 54 of the constitution of the State, which denies to the legislature "the power to limit the amount of recovery for injuries resulting in death, or for injuries to property." On a petition for a rehearing, which was overruled, the foregoing opinion was modified to the extent of holding that the provisions as to the employer were not in conflict with any provisions of the constitution. The commissioners were confronted, therefore, with the necessity of drafting a bill that would avoid the difficulties which led to the holding of unconstitutionality of the former bill. This was accomplished by making the act an elective one, subject to choice or rejection by both parties, each necessarily taking affirmative action to secure election. The employer's defenses in case of failure to elect are abrogated.

The law is general in its scope, covering municipal employments and all private employments in which there are three or more employees, domestic and agricultural labor and railroad employments in which Federal statutes control being excepted. An administrative board of three persons is contemplated, having the power of decision in cases in which the interested parties fail to reach voluntary agreements; limited appeals to courts on these decisions are allowed. Compensation is on a basis of 65 per cent of the weekly wages, with provision for medical, etc., expenses, and a schedule for maimings in lieu of other compensation for such injuries.

An interesting discussion relates to the question of insurance under the act, so-called "monopolistic insurance," whether by the State or by stock companies, being condemned. The experience of the States of Ohio, Washington, and West Virginia with State funds of exclusive operation is discussed, partly independently and partly by reference to the report of a commission which reported to the senate of the State of Missouri on this subject. The conclusion is that the advantages of lower cost, which are supposed to represent the chief advantage of State administration, are not sufficient to warrant the assumption of such an undertaking, while other disadvantages, both financial and social, were charged. Provision was made, therefore, for self-insurance in cases approved by the commission, for mutual insurance, reciprocal insurance associations, and insurance in stock companies; also for the establishment of a State institution to be known as the Kentucky Employces Insurance Association, patterned after the corresponding association of the State of Massachusetts.

A tax of 4 per cent of all insurance premiums is proposed for the raising of funds to meet costs of administration.

The commission recommended an amendment to the constitution to remove the difficulty found with section 54, and while disclaiming any desire to interfere in any way with the legislature in the discharge of its duties, its draft of the bill for compensation was complete. Means of identification are not at hand, but it seems a fair inference that single bills on the subject which have been introduced in the senate and house, respectively—one to provide a compensation system and one to amend the constitution—are those that the commission recommended. The house committee on industrial insurance, to which the bill in that body was referred, subsequently reported a substitute for the compensation bill, the nature of which is not indicated in the source from which information on this point was secured.

MARYLAND.¹

The experience of the workmen's compensation law in Maryland for the first year that it has been in effect, November 1, 1914, to October 31, 1915, is presented in a 79-page pamphlet issued by the State industrial accident commission under date of December 31, 1915. It was to take the place of a previous statute which the report characterizes as "archaic and unworkable" that the present compensation law was passed, and the first "year's experience under the law has demonstrated that in respect of injuries occurring in prosecution of employments therein enumerated the act affords certain and

¹ First Annual Report of the State Industrial Accident Commission of Maryland for the year Nov. 1, 1914, to Oct. 31, 1915. Baltimore, 1915. 79 pp. Illustrated.

prompt pecuniary relief"; that "the elimination of the ingredient of fault as a cause of the injury has greatly narrowed the debatable ground as to the right of relief"; that "so far as the employers are concerned the element of certainty as to the cost of compensation and the state of satisfaction of their employees resulting from the assurance of relief in case of accident have been decided advantages in the prosecution of business," the best evidence of which is the "fact that no serious suggestion has been made by employers, as has happened in other States, to attack its constitutionality."

The report emphasizes three outstanding features of the law: (1) It is compulsory; (2) it requires that unless an employer can furnish satisfactory proof of financial ability to pay compensation as it might accrue he shall insure that compensation in an approved insurance company or association or in the State accident fund administered by the commission; and (3) it provides for the operation of the State fund in competition with private insurance companies, which enables it to protect the employer against unduly high insurance rates. As a result of the first year's experience the rates have been reduced approximately 15 per cent.

Of the 12,000 employers who came under the act during the year, 11,035 (92 per cent) insured with stock companies, 842 (7 per cent) insured in the State accident fund, and 123 (1 per cent) were granted the right to carry their own insurance. A table is presented showing the number of employers under each employment group adopting each specified method of insurance. Five hundred and three accidents were adjusted under the policies of the State accident fund. The condition of this fund on October 31, 1915, was as follows:

ASSETS.

Cash on deposit, State treasury.....	\$48,501.59
Policyholders' accounts.....	6,114.83
Total assets.....	\$54,616.42

LIABILITIES.

Reserve for losses.....	\$4,213.93
Reserve for unearned premiums.....	3,145.64
Reserve for special surplus ¹	4,682.88
Reserve for surplus.....	42,573.97
Total reserves.....	54,616.42

INCOME AND DISBURSEMENTS.

Income.

Net premiums written.....	\$46,826.81
Interest on deposits to Oct. 15, 1915.....	293.84
Transferred from appropriations for 1914 of the State industrial accident commission.....	15,000.00
Total income.....	62,120.65

Disbursements.

Losses paid, medical.....	\$2, 315. 88	
Losses paid, temporary total disability.....	3, 521. 89	
Losses paid, permanent partial disability.....	1, 281. 71	
Losses paid, death (dependency).....	324. 75	
Losses paid, death (no dependency).....	60. 00	
	<hr/>	
Total losses paid.....		\$7, 504. 23
Reserve for losses.....	4, 213. 93	
Reserve for unearned premiums.....	3, 145. 64	
Reserve for special surplus ¹	4, 682. 88	
Reserve for surplus.....	42, 573. 97	
	<hr/>	
Total reserves.....		54, 616. 42
		<hr/>
Total losses and reserves.....		62, 120. 65

Accidents to the number of 20,348 were reported in the 12-month period; of these 121 were fatal. Of the 3,443 claims filed, 3,352 were nonfatal and 91 fatal. Compensation was awarded in 2,977 ² cases and disallowed in 199 cases, leaving 267 cases unsettled on November 1, 1915. The total number of accidents is classified according to the character and cause of the injuries, the age, sex, marital condition, and wages of the persons injured, and charts and diagrams graphically depicting most of these tables are presented. Similar classification is made of the 503 accidents occurring in employments insured under the State accident fund. Two hundred and forty-nine claims were contested, of which 131 were settled in favor of the claimants.

Compensation under the Maryland law is 50 per cent of the average weekly wage. In death cases, widows and minor children or other dependents receive 50 per cent of the deceased employee's average weekly wage for a period not exceeding eight years. In all cases of temporary disability, whether total or partial in character, no compensation is paid for the first two weeks, but the injured employee is entitled to limited medical and hospital service. The benefits which accrued to workmen or dependents during the first year are shown in the following table.

¹ As provided in sec. 23, ch. 800, acts of 1914.

² This is the statement of the claims bureau; it does not agree with the total number of awards given in the table. This discrepancy is not explained.

BENEFITS DERIVED BY BENEFICIARIES OF THE MARYLAND WORKMEN'S COMPENSATION LAW DURING THE YEAR ENDING OCT. 31, 1915.

Payments made for—	Number of awards.	Compensation paid.	Compensation outstanding.	Other payments.	Total.
Fatal accidents.....	66	\$13,633.42	\$165,317.12	.....	\$178,950.54
Permanent partial disability.....	225	25,020.57	19,429.64	.....	44,450.21
Temporary total disability.....	2,960	83,713.64	.....	.....	83,713.64
Temporary partial disability.....	5	33.31	.....	.....	33.31
Medical service in compensation cases.....	.....	.....	.....	\$37,321.08	37,321.08
Medical service in cases that did not reach compensation.....	.....	.....	.....	53,843.10	53,843.10
Funeral expenses.....	.....	.....	.....	5,720.65	5,720.65
Total.....	3,256	122,400.94	184,746.76	96,884.83	404,032.53

¹ Includes 310 cases in which weekly payments amounting to \$2,049.83 were being made on Nov. 1, 1915.

It is quite likely that this statement includes some awards made between November 1 and the date the report was written; otherwise no explanation is found for the discrepancy between the total number of awards as given in this table and the total number of awards (2,977) reported by the claims bureau.

The ratio of claims to accidents was 16.9 per cent. Drowning showed the highest percentage of accidents resulting seriously (100 per cent) and the lowest percentage (5.9 per cent) was due to asphyxiation or suffocation. The report includes some important rulings of the commission and a "gallery of beneficiaries" showing the pictures of a few of those receiving compensation, and closes with a copy of the rules of procedure established by the State Industrial Accident Commission.

MICHIGAN.¹

The annual report of the industrial accident board of Michigan for the year ending December 31, 1915, embodies statistical facts and figures classified according to industry, nature, and extent of injury and method of carrying risk. An employer may elect to cover his risk by stock insurance, mutual insurance, State insurance, or he may carry his own risk. The 15,106 employers and 505,025 employees which the report states are affected by the workmen's compensation act are divided according to method of insurance as follows:

EMPLOYERS AND EMPLOYEES AFFECTED BY THE WORKMEN'S COMPENSATION ACT, SHOWING NUMBER AND PER CENT UNDER EACH METHOD OF INSURANCE.

Method of insurance.	Employers.	Per cent.	Employees.	Per cent.
Stock.....	13,325	88.2	294,312	58.3
Mutual.....	767	5.1	38,881	7.7
State.....	559	3.7	14,078	2.8
Own risk.....	455	3.0	157,754	31.2
Total.....	15,106	100.0	505,025	100.0

¹ Report of the industrial accident board for the year 1915. Lansing, 1916. 16 pp.

In addition to these, all the municipalities are subject to the law without election on their part, and this includes the 84 counties, 108 cities, 338 villages, 1,245 townships, and 7,362 school districts. The law also covers the employees of the State except the State board of agriculture and the regents of the university.

The total number of accidents during the year was 39,781, of which 26,289 caused general disability for less than 2 weeks.¹ The remainder, 13,492, were compensable and classified according to industry as follows:

NUMBER AND PER CENT OF COMPENSABLE ACCIDENTS UNDER EACH SPECIFIED INDUSTRY BY NATURE OF DISABILITY.

Industry.	Fatal.		Permanent partial.		Temporary total.		Total.	
	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
Auto and auto parts.....	17	.88	260	13.38	1,666	85.74	1,943	100.00
Construction.....	21	2.11	30	3.02	943	94.87	994	100.00
Engine and machinery manufacturing.....	1	.44	22	9.69	204	89.86	227	100.00
Food products manufacturing.....	4	.79	22	4.34	481	94.87	507	100.00
Foundry and machine shops.....	5	1.05	38	7.95	435	91.00	478	100.00
Implement and tool manufacturing..	3	1.68	22	12.29	154	86.03	179	100.00
Light and power.....	11	5.09	8	3.70	197	91.20	216	100.00
Lumber.....	29	2.32	83	6.65	1,137	91.03	1,249	100.00
Metal and metal products.....	7	1.33	57	10.82	463	87.85	527	100.00
Mining, coal.....	6	4.35	6	4.35	126	91.30	138	100.00
Mining, iron.....	39	4.50	24	2.76	805	92.74	868	100.00
Mining, copper.....	58	4.31	43	3.20	1,244	92.48	1,345	100.00
Miscellaneous manufacturing.....	19	1.60	132	11.13	1,035	87.27	1,186	100.00
Municipalities.....	4	2.58	8	4.76	156	92.86	168	100.00
Paints and chemicals.....	11	4.26	15	5.81	232	89.92	258	100.00
Printing and binding.....			4	4.60	83	95.40	87	100.00
Railroads, steam.....	44	5.35	48	5.84	730	88.80	822	100.00
Railroads, electric.....	11	6.59	13	7.78	143	85.63	167	100.00
Woodworking and furniture manufacturing.....	7	1.31	77	14.39	451	84.30	535	100.00
Unclassified.....	35	2.19	60	3.75	1,503	94.05	1,598	100.00
Total.....	332	2.46	972	7.20	12,188	90.33	13,492	100.00

Under the provisions of the Michigan law the compensation is payable in weekly installments, the amount generally being 50 per cent of the average weekly wage. In fatal cases the payments continue for 300 weeks and in cases of permanent total disability the payments may continue as long as 500 weeks. It is therefore apparent, says the report, that in a considerable number of cases the payments of compensation will run on for a number of months or years according to the nature of the accident or extent of disability, and that such cases will remain open until final payment is made. Under the system in vogue receipts signed by the injured workmen or dependents are regularly filed for the weekly payments until the entire compensation required in the case is paid, at which time they are checked up, balanced, attached to the final settlement receipt and filed away

¹ The report does not show what accidents are reportable under the practice of the Michigan board. A disability to be compensable must last 2 weeks, but payment is made from the date of injury if the disability lasts 8 weeks or more.

among the completed cases. The number of cases so completed in the year 1915 was 11,881, of which 60, or 0.5 per cent, were fatal; 1,154, or 9.7 per cent, were permanent partial; 6, or 0.05 per cent, were permanent total; 2,448, or 20.6 per cent, lasted eight weeks or more; and 8,213, or 69.1 per cent, lasted less than eight weeks. About one-half, 50.5 per cent or 5,998, were insured in stock companies, 9.7 per cent (1,157) were insured in mutual companies, 2.3 per cent (272) were insured in the State fund, while in 37.5 per cent (4,454) of the cases the risk was carried by the employers. The average total compensation paid per case was \$76.38. The average medical aid paid per case in 5,165 cases was \$28.77.

The report states that the total amount paid during the year to injured workers and their dependents was \$1,213,103.32, and in addition to this \$148,615.20 was paid in medical and hospital service. The medical and hospital expense paid by employers under the State accident fund is not included in the above statement, as the State was not authorized to cover medical and hospital service until the going into effect of the act passed for that purpose in 1915.

The report suggests the necessity for a change in the method of handling disputed administrative questions such as the nature and extent of the injury, continuance of disability, stoppage of compensation, disputed medical and hospital charges, and the like. At present most of these matters are handled on petitions filed with the board and since the established rules of evidence are held to be binding on the board, ex parte affidavits, doctor's certificates, and like papers are not admissible as evidence at such hearings, have no legal standing, and can not be made the basis for action by the board. This fact, it is pointed out, necessitates the taking of formal depositions involving much time and expense and causing delay in the awarding of compensation. The board suggests a new system which it is claimed would bring together in the locality where they reside all the parties to these disputed questions, who in consultation with an officer or representative of the board would be able to sift out and settle such matters at a great saving in time and money to injured workers as well as to the employers and insurance carriers. The work of administration would be expedited, it is believed, and the benefits of the law brought more quickly and surely to all parties concerned. The field work necessary to put this plan into operation is briefly outlined and the additional expense thus incurred would be offset by saving in correspondence, postage, stationery, and other work.

NEW YORK.

STATE INSURANCE FUND.

"The State fund—Its right to compete," is the title of a pamphlet issued by the State Insurance Fund of New York with the indorsement of the Industrial Commission. The four parts of the booklet comprise a statement by the commission, with a letter from Vice President Rowe of the Aetna Life Insurance Co. protesting against alleged unfair treatment by the State officials managing the insurance fund, Gov. Whitman's reply, and the statement of Mr. Baldwin, manager of the State Insurance Fund.

Vice President Rowe's protest alleged an "unfair and unwarranted attempt" on the part of an official of the State of New York "to disparage and discredit the motives and honesty" of stock companies writing workmen's compensation insurance. Two points in particular were complained of, one that a letter addressed to an employer formerly insured in the State fund, but about to withdraw and take insurance in a stock company, declared that "all arguments against State fund insurance are worthless, and in point of fact they are only conjured up for the purpose of confusing and disturbing employers in order to mulct them for agents' commissions and stockholders' profits"; the other point related to a provision of the law relative to notice of withdrawal. It was claimed that only by establishing a cut-rate insurance system, endowed by a subsidy from the State treasury for administration expenses, free from supervision and taxation, employing unlicensed solicitors and agents, and "clothed with authority to offer unfair inducements denied to all other competitors," could the State fund take its stand. It was further declared that this condition existed by the action of the legislature which had set up the fund, endowing it with special privileges. It was argued that the compensation act was restricted in its application, so that all the employees of an employer insured under it were not necessarily covered; that a common-law liability, as for the loss of service in the case of parents or husband and wife remains unprovided for; that personal injuries or disfigurements not mentioned in the act might give rise to suit for damages; that classes of employees for whom admiralty law might afford relief could collect damages; that in case of the unconstitutionality of the act no protection would be furnished by the fund, eminent legal authorities being still in doubt as to its constitutionality; that extra assessments might be enforced; and that the State fund was being conducted by a new and inexperienced organization, as compared with the expert quality of service offered by private stock companies. On all these points it was claimed that the private stock companies offered complete protection as against the incomplete or doubtful benefits of the State fund.

The governor's reply did not enter upon the merits of the question other than to sustain the right of the manager of the fund to depart from ordinary official conduct in view of the fact that the business was a competitive one, which was held to justify as proper the statements that the manager had made. Points of the law were mentioned, the construction of which by the attorney general of the State met certain objections raised, taking the opposite view from that contended for by Mr. Rowe.

The statement by Manager Baldwin took up, point by point, the objections raised, sustaining the original statement as made, but not as quoted by Mr. Rowe, setting forth the nature of the fund as offering insurance at absolute cost, and subsidized only in its initiation in order to gain a footing as a fund with sufficient assets to afford safety. On the question of coverage it was pointed out that common-law liabilities were abrogated where the law applies, and that all employees of an employer entitled to insure under the act were covered by it; the availability of proceedings in admiralty where the employment permitted it was conceded. Constructions of the law by the attorney general and by the State courts were presented as rebutting certain charges, especially the one as to doubtful constitutionality, and the one relating to the power of making assessments, which it was held did not exist. The experience of the stock companies was declared to be offset by the fact of the safety engineering department maintained by the fund and its cooperation with the inspection bureau of the labor department of the State. The question of disfigurement, which the act does not cover, was held undecided until the court of appeals should pass upon it, though the fact that in the case cited insurance was in a stock company and not in the State fund was pointed out, and the suggestion made under that, that if insurance had been in the State fund, the abrogation of common-law actions would have prevented the suit. The conclusion was reached that "the claim of superior service advanced by the stock companies is without foundation in fact," an attitude which the Industrial Commission indorses, together with the right of the State fund to compete for business, as was also indicated in the governor's reply.

REPORT OF STATE SUPERINTENDENT OF INSURANCE.¹

In a pamphlet of 62 pages the New York State superintendent of insurance presents the preliminary text and tables of the forthcoming fifty-seventh annual report of the department for the year ending December 31, 1915.

Discussing workmen's compensation, the report indicates that "notwithstanding the higher cost of stock insurance with its agency

¹ New York. Preliminary text and tables, fifty-seventh annual report of the superintendent of insurance, covering transactions of calendar year closing Dec. 31, 1915. Albany, 1916. 62 pp.

expense, the employers, as a whole, seem to prefer that form of protection," which appears to be supported by the statement that 76 per cent of the workmen's compensation risks are carried by stock companies, 11 per cent by mutual companies, and 13 per cent in the State insurance fund. Eight of the mutual companies, it is stated, received less than \$50,000 per annum in premiums, while the remaining 9 are doing about 90 per cent of the mutual business. All but one or two, it appears from the report, declared dividends ranging up to 20 per cent, the maximum permitted by the department. They carry catastrophe reinsurance or are required to maintain a reserve against the catastrophe hazard. If reinsurance is carried the catastrophe reserve is not required but instead the companies are permitted to treat the catastrophe fund as an accumulation of surplus to meet unforeseen losses of all kinds. No mutual company in New York may now be organized unless it has a prospective annual premium income of at least \$25,000.

As to State insurance, the report says:

The competition offered by the State fund is upon a basis which makes difficult any comparison between it and the private insurance carriers. The fund is not under the supervision of this department and is not subject to the wise restrictions which have been placed by law upon the private companies. Insurance in the fund relieves an employer from liability and to further attract him the State bears all the expenses of the fund until the year 1917. With these advantages the State fund, given time enough, should prove a formidable competitor against stock insurance. It can not be, however, that it was the intent of the legislature which created the fund, to place it upon such a basis of disparity. This part of the New York workmen's compensation law is borrowed from Ohio, where the insurance plan is an absolute State monopoly. The New York program depends for its success upon the highest quality of service at the lowest possible legitimate cost.

It is a question in my mind whether the subsidy granted to the fund should not be repaid from its earnings so that eventually the venture will have cost nothing to the State. At all events there is ground for assuming that the fund is well able to bear its own current expenses without further assistance from the State. The law should be so amended as to make possible this desirable economy. I would go further and suggest for your consideration the possible advisability of reorganizing the fund as a bona fide mutual corporation with power to write all lines of liability insurance collateral or incidental to workmen's compensation.

Rates for compensation insurance are based upon pay roll expenditures and various business enterprises are classified according to the relative accident hazard, the class rate being adjusted by the determination of an individual rate. The insurance department approves the manual of tariff rates and the general rules governing merit rating, or the departure from tariff rates in arriving at individual rates. The companies themselves classify the risks and audit the pay rolls of their assured for the purpose of ascertaining the actual premiums to be charged. The physical features are measured and rated by means of a schedule, this process being called schedule rating, and supple-

mental to this a plan known as experience rating has been devised for the purpose of measuring the moral hazard. A compensation inspection rating board insures impartial treatment in the application of merit rating. With reference to maintaining adequate rates and avoiding opportunities for indiscriminate rate cutting, whether through wrongful classification, misapplication of individual rate, or dishonest audit of pay rolls, the superintendent of insurance contends that the law should be changed to provide regulatory power ample to prescribe methods of procedure and rules of conduct so that the system of rating may be scientifically developed and impartially administered. It is believed that the law should compel membership in a rating association conducted under such rules and regulations as may be prescribed by the superintendent of insurance, thus giving him authority to establish a practice of submitting all risks placed for insurance to such rating association for independent review and determination of rate.

The necessity for revision of rates is recognized and reference is made to the joint conference held in New York City on September 28 and 30, and December 3, 1915, for the purpose of considering the revision of workmen's compensation rates, classifications, and rules.¹

The report discusses at some length the subject of liability and compensation loss reserves, referring to a recommendation reported to the national convention of insurance commissioners, that liability and compensation reserves be computed separately on the basis of a fixed ratio (percentage for each class to be determined later) instead of a fixed ratio of 54 per cent as had been previously recommended and adopted by the convention as a temporary expedient to afford relief to certain companies "against which there had been unjust discrimination." The enactment of legislation to effectuate this plan is suggested. Under the present construction of the law companies engaged in the liability business 10 years or more reserve on December 31, 1915, their liability business on the basis of their liability experience, and their compensation business on a 54 per cent loss ratio. Companies which have not been engaged in the liability business 10 years reserve both liability and compensation business on the ratio fixed by statute, viz, 54 per cent on December 31, 1915.

JOINT CONFERENCE ON WORKMEN'S COMPENSATION INSURANCE RATES.²

For the purpose of effecting uniform revision of basic rates for workmen's compensation insurance, there was held in New York City on September 28 and 30 and December 3, 1915, a general conference of rating bureaus composed of representatives of the Work-

¹ An extended account of this conference is given below.

² State of New York Insurance Department, *Proceedings of the Joint Conference on Workmen's Compensation Insurance Rates*. Albany, 1915. 39 pp.

men's Compensation Service Bureau of New York, the Compensation Inspection Rating Board of New York and the Massachusetts Rating and Inspection Bureau. Representatives of the insurance departments of New York, Massachusetts, California, Maryland, and Pennsylvania, and of the Industrial Commission of Wisconsin participated in committee work.

A record of the activities of four committees appointed by the conference—rules, classifications, basic pure premiums, and loadings and differentials—constitutes about half of a 39-page report issued by the New York State insurance department in which the proceedings of the conference are briefly set forth.

The rules committee recommended an increase from \$10 to \$20 on compensation policies covering contractors and suggested four fundamental principles for pay-roll division, as follows:

1. The operative procedure within a given plant shall not be subject to division into several manual classifications where the employees are engaged, or the different operations are conducted in such manner that they are all brought together, the employees being commonly exposed to the general hazards of the enterprise which is best represented by its governing classifications.
2. Where there are distinct enterprises conducted in a given class by the same employer and the entire work in each enterprise is conducted either in a separate building or on a separate floor or floors of a building, the employer conducting each of such enterprises as a separate undertaking, with a separate pay-roll record, it is compulsory that such undertaking be separately classified and rated.
3. No operation normally prevailing in the work covered by the governing classification shall be considered a distinct enterprise.
4. Certain pay rolls, such as drivers and helpers, chauffeurs and helpers, clerical office employees, etc., must always be separately stated and rated unless the classification to be used specifically prohibits it.

An effort was made to harmonize these rules with the classifications in order to eliminate difficulties which had existed.

The work of the classification committee was "to establish classifications which properly described industrial enterprises, eliminating doubt as to the scope of the classifications, simplifying the use of the manual and insuring so far as possible uniformity of treatment in the application of the classifications."

In the determination of basic pure premiums that committee decided that consideration should first be given to Massachusetts' experience, then to the experience of New Jersey, Illinois, Michigan, and Wisconsin, that the aggregate or individual experience of these latter states should be used in connection with that of Massachusetts and reduced to the Massachusetts level by the application of suitable factors to reflect the difference in law and accident frequency. The establishment of a standing committee on manual rules, classifications, and rates was recommended for the primary purpose of clearing all proposed amendments through one source and thus insure standardization of practices.

The committee on loadings and differentials considered allowance for (1) differences in compensation acts governing benefits; (2) underestimate of outstanding losses; (3) increasing claim costs; (4) industrial diseases; (5) variation in rates due to merit rating; (6) differences in accident frequency; and (7) loadings for expense, profit, and catastrophe. The attention of the committee seems to have been directed primarily to a consideration of industrial diseases. An exhibit is presented showing the probable relative cost of compensation for industrial diseases and industrial accidents based on the statistics of experience in the United Kingdom, since in this country there is no direct basis of estimate of cost of occupational diseases. It is stated that mine diseases of the eye and skin, anthrax,¹ and phosphorus poisoning apparently do not exist to an appreciable extent in America, and that if these are excluded the health hazard by far predominating in both countries is lead poisoning. Since the British statistics show the disease cost of compensation by industries and not by diseases it is impossible, declares the report, to determine exactly the division of cost between what may be termed "American" and "non-American" diseases in the British data. By deducting the cost of all mine diseases, £350,691 (\$1,706,637.75) and an estimated total cost of £3,374 (\$16,419.57) for 197 cases of anthrax and 2 cases of phosphorus poisoning from the total cost of disease compensation, £464,637 (\$2,261,155.96) for seven industries—mines, quarries, railways, factories, harbors and docks, constructional work, and shipping—a balance of £110,572 (\$538,098.64) is obtained which is estimated to be the approximate cost in the United Kingdom of American occupational diseases in industries in which the total accident cost was £16,182,753 (\$78,753,367.47). That is, the British cost of American occupational diseases was about 0.68 per cent of the corresponding accident cost. Making no allowance for tuberculosis, pneumonia, bronchitis, etc., not in the British category of 25 specified diseases, the expected American cost would, according to the report, be about twice 0.68 per cent or 1.4 per cent for the same industries and the same distribution of workmen. The inclusion of tuberculosis alone, however, is estimated to increase this cost to about 2 per cent² and this is proposed as a proper estimate of the probable relative cost of the particular diseases studied to the cost of accident coverage in this country, in the industries mentioned, assuming similar industrial distribution of workers in both countries.

A table is presented showing for the seven industries mentioned the probable relative cost of disease to accident in the actual occupa-

¹ This assumption is clearly unwarranted so far as anthrax is concerned, since the report of the Massachusetts Industrial Accident Board for 1914 showed 8 cases, 2 of which were fatal.

² The report states that this figure may be expected to be reduced by a third as American regulation of industrial poisons improves, and by another third if occupational tuberculosis can at the same time be obliterated.

tional distribution in a given State as Massachusetts. The table also indicates the actual British disease cost and the cost with non-American diseases eliminated, to which reference has been made. In this comparison allowance has been made by estimate, first, for the practical absence of certain English mine diseases in this country and the full addition of various diseases that would be admitted in American acts compensating occupational diseases, and second, for the difference in distribution of workers in Great Britain and Massachusetts, for which state data were available as to accident cost and distribution by classifications. The committee concluded that 1 per cent ^a of the present total nominal accident cost is considered as a proper amount for distribution over the disease-hazardous classifications of Massachusetts, in addition to a 1 per cent flat loading on all industries for complete industrial disease coverage.

In Massachusetts the total cost of accidents relative to pay roll, during the period July 1, 1912, to September 30, 1913, was 0.39 per cent; 1 per cent of this is approximately 0.004. All preliminary estimated premiums for disease were accordingly cut in two with the results exhibited in the following table. In view of the lack of definite data as to occupational diseases in the United States the premium rates are largely estimated, with the tendency, probably, to put them high enough to meet all contingencies.

EFFECT OF ADDITION OF 1 PER CENT TO ALL ACCIDENT PURE PREMIUMS FOR OCCUPATIONAL DISEASES, BASED ON TOTAL COST OF ACCIDENTS IN MASSACHUSETTS, JULY 1, 1912, TO SEPTEMBER 30, 1913, SHOWING INDUSTRIAL HEALTH HAZARDS INVOLVED IN EACH SPECIFIED PROCESS.^b

[It must be remembered that in addition to the premiums indicated in the following table it is proposed to apply a flat 1 per cent of the accident pure premium on every classification.]

Code number.	Process.	Industrial health hazards.	Additional pure premium for occupational disease.
			<i>Cents.</i>
0100, 1	Tree pruning, spraying, fumigating, etc.	Potassium, cyanide, prussic acid, arsenate of lead, vitriol.	4
1412	Gold refining (no ore reduction).....	Sulphuric acid fumes, heat, mercury, lead, potassium cyanide.	3
1421, 3	Iron smelting.....	Carbonmonoxide, fumes, heat, moisture, temperature change, fatigue, metal dust, clay dust, glare.	6
1466	Graphite manufacturing.....	Dust, heat, temperature change.....	2

^a In the table referred to it is estimated that 1.5 per cent additional of the total cost of accidents should be distributed according to disease hazard over those classifications now recognized as health hazards, and that 1 per cent should be added to all accident pure premiums to make provision for the occupational diseases that might require coverage in this country.

^b The committee makes it clear that the table must not be supposed to apply only to Massachusetts. The pure premium for occupational disease for any classification as determined for Massachusetts is assumed to apply to any State in which that classification occurs; the total cost of disease coverage relative to accident depending on the industries in the State, of course, and in general differing from the present total of 1 per cent in Massachusetts. The disease pure premiums for classifications under which there was no issue in Massachusetts between July 1, 1912, and September 30, 1913, have not at the present time been estimated. These and others that may be required in any State may be estimated quite satisfactorily by comparison with the premiums here assigned to classifications known to have comparable disease hazards.

EFFECT OF ADDITION OF 1 PER CENT TO ALL ACCIDENT PURE PREMIUMS FOR OCCUPATIONAL DISEASES, BASED ON TOTAL COST OF ACCIDENTS IN MASSACHUSETTS, JULY 1, 1912, TO SEPTEMBER 30, 1913, SHOWING INDUSTRIAL HEALTH HAZARDS INVOLVED IN EACH SPECIFIED PROCESS—Continued.

Code number.	Process.	Industrial health hazards.	Additional pure premium for occupational disease.
			<i>Cents</i>
1652	Lime manufacturing.....	Lime dust, fumes, irritants of eyes and skin, carbon dioxide.....	4
1700	Adamant plaster manufacturing.....	Dust.....	4
1704	Stone crushing.....	do.....	3
1741	Emery crushing, grinding.....	do.....	2
1743	Silica grinding.....	do.....	3
1745	Soapstone manufacturing.....	do.....	3
1780	Emery, carborundum wheel manufacturing.....	do.....	1
		Dust, heat, temperature change.....	3
2080	Stock yards.....	Infection.....	2
2081	Slaughtermen.....	do.....	2
2082	Packing houses.....	Heat, dampness, steam, solder.....	2
2171	Cigar, cigarette manufacturing (by hand).....	Dust, fatigue.....	3
2175	Tobacco manufacturing (snuff).....	Dust.....	2
2260, 3	Wool combing, scouring, carbonizing..	Dust, fumes.....	3
2410	Waterproofing cloth (rubber).....	Carbon disulphide, sulphur chloride, benzine, antimony, lead, wood alcohol, naphtha, mercury.....	3
2411	Waterproofing cloth (not rubber).....	Fumes.....	1
2413	Textile dyeing, finishing, printing (new goods).....	Dyestuffs, potassium cyanide.....	3
2414	Bleacheries.....	Chlorine, hypochlorites.....	6
2430	Oilcloth manufacturing.....	Fumes, lead, irritants.....	3
2431	Linoleum, cork carpet manufacturing..	Dust, fumes, lead, irritants.....	3
2440	Wool separation.....	Dust, fumes.....	3
2530	Hat manufacturing (felt).....	Mercury, fur dust, steam heat, shellac, wood alcohol, grease, carbon monoxide, emery sandpaper, nitric acid, arsenic, dyestuffs.....	9
2580-2	Laundries.....	Heat, dampness, fatigue, bleaching compounds.....	2
2583	Dyeing, cleaning.....	Dyestuffs, benzine, ammonia.....	3
2600	Fur manufacturing (preparing skins)...	Lime, arsenic, mercury dyes, fur dust, infection.....	8
2610	Degreasing skins.....	Benzine.....	3
2620	Leather manufacturing (enamel).....	Heat, anilins, amyl acetate fumes.....	4
2621	Morocco dressing.....	Heat, fumes.....	4
2622	Leather dressing (n. o. c.).....	Heat, fumes, chrome, anilins.....	4
2623	Tanning.....	Lime, lead dust, naphtha, amyl acetate, chrome, ammonia.....	6
2624	Curriers.....	Dust.....	4
2940	Lead pencil manufacturing.....	do.....	2
2941	Crayon manufacturing.....	Dust pigments.....	3
3083	Foundries (n. o. c.).....	Heat, fumes, dust, glare, dampness.....	4
3084	Foundries (bell).....	Heat, fumes, glare.....	4
3085	Foundries (brass).....	Lead poisoning, fumes, heat, dampness, temperature, change, dust.....	6
3120-2	Razor, cutlery manufacturing.....	Dust, lead, potassium cyanide.....	4
3302	Bedstead manufacturing (metal).....	Lead, dust, wood alcohol, benzine, amyl acetate.....	7
3312, 3	Copper, zinc goods manufacturing (no smelting-rolling).....	Copper, arsenic, lead, antimony, zinc.....	4
3331	Lead works—sheet, pipe, shot (no smelting).....	Lead, arsenic, antimony.....	20
3334	Tin foil manufacturing.....	Lead.....	4
3335	Babbitt metal manufacturing.....	Lead, heat.....	7
3337	Galvanizing, tinning sheet metal.....	Acid fumes.....	3
3360-3	Oxy-acetylene, electric cutting, welding	Actinic rays, cyanides.....	4
3370, 2	Plating.....	Lead, mercury, acid, fumes, benzine, potassium cyanide.....	3
3631	Machine shops, with foundry.....	(See Foundries).....	4
3640	Storage battery manufacturing from lead plates.....	Lead, acid fumes.....	18
3641	Storage battery manufacturing from iron, nickel plates.....	Fumes.....	2
3642	Dry battery manufacturing.....	Dust, fumes, benzol, acids.....	4
3683	Thermometer manufacturing.....	Mercury.....	8
3687	Photographic supplies manufacturing..	Mercury, cyanides, vanadium.....	3
3688	Photographic films, dry plates.....	Mercury, cyanides, fumes, nitrocellulose.....	4

EFFECT OF ADDITION OF 1 PER CENT TO ALL ACCIDENT PURE PREMIUMS FOR OCCUPATIONAL DISEASES, BASED ON TOTAL COST OF ACCIDENTS IN MASSACHUSETTS, JULY 1, 1912, TO SEPTEMBER 30, 1913, SHOWING INDUSTRIAL HEALTH HAZARDS INVOLVED IN EACH SPECIFIED PROCESS—Continued.

Code number.	Process.	Industrial health hazards.	Additional pure premium for occupational disease.
			<i>Cents.</i>
4014	Potteries, earthenware manufacturing—tiling, gas retorts, sewer pipes.	Dust, heat, dampness, lead pigments, sulphur.	18
4052	Earthenware manufacturing—household utensils, art objects.	Dust, pigments.....	12
4100, 10	Glass manufacturing.....	Heat, light, lead, dust of glass, emery, sand-paper.	5
4111	Bottle manufacturing (no machine blowing).	Heat, light, blowing.....	6
4113	Glass manufacturing (cut).....	Lead, dust, hydrofluoric acid.....	6
4131	Mirror manufacturing (no glass manufacturing).	Mercury, acid fumes.....	8
4133	Cathedral, art, stained glass manufacturing.	Fumes of turpentine, amyl acetate, wood alcohol, benzine, lead poisoning, chrome.	6
4150, 2, 3	Optical goods, eye-glass, glass-eye manufacturing.	Dust, chrome.....	3
4205	Pulp manufacturing (sulphite).....	Lime, sulphuric acid, fumes, moisture, dye-stuffs.	4
4278	Fly paper (no paper manufacturing)...	Formaldehyde fumes.....	5
4301	Wall paper manufacturing—designing, printing, etc. (no paper manufacturing).	Arsenic, acid fumes, chrome, anilins.....	15
4350	Electrotyping.....	Lead, arsenic, dust, acids.....	4
4360	Motion picture (film development).	(See Photography).....	3
4400	Rubber reclaiming.....	Benzine, naphtha, gasoline, carbon disulphide.	4
4410	Rubber goods manufacturing.....	Carbon disulphide, sulphur chloride, lead, naphtha, benzine, wood alcohol, mercury, acids.	5
4432		Nitrocellulose, dust, fumes.....	2
4440	Celluloid manufacturing.....	Carbon dioxide.....	2
4500, 2	Baking powder, soda (bicarbonate) manufacturing.	Fumes, hydrocyanic, hydrochloric, hydrofluoric, nitric, etc.	10
4510	Acid manufacturing (n. o. c.).....	Various chemicals.....	4
4511	Analytical chemists.....	Fumes, lime.....	2
4520	Alcohol, acetic acid manufacturing.....	Fumes.....	8
4521	Ammonia manufacturing.....	Chlorine, formaldehyde, sulphur, carbolic acid.	13
4523	Disinfectant manufacturing.....	Ammonia, benzol, bromin, carbon disulphide, chlorine, iodine, nitrous gases, carbolic acid, etc.	12
4524	Chemical manufacturing (n. o. c.).....	Chlorine, lime.....	15
4527	Bleaching powder manufacturing.....	Fumes.....	4
4528	Creosote manufacturing.....	do.....	3
4530	Camphor manufacturing.....	Lead.....	22
4551	White lead manufacturing.....	Wood alcohol, methyl bromide, methyl iodide, nitrous gases.	4
4553	Anilin, alizarin manufacturing.....	Anilins, ammonia, sulphuretted hydrogen....	4
4554	Color manufacturing (dry).....	Pyrogallie acid, tanins.....	4
4557	Ink manufacturing (printing).....	Lead, chrome, antimony, turpentine.....	16
4558	Paint manufacturing (no lead manufacturing).	Dust.....	4
4560	Whiting manufacturing.....	Ammonia, wood alcohol, turpentine.....	4
4561	Varnish manufacturing.....	Bone dust, phosphates, nitric, nitrous, sulphuric, hydrochloric, hydrofluoric, and other acids, benzine, infection.	3
4580	Fertilizer manufacturing.....	Dust, fumes.....	2
4590-2	Blackings, polishes.....	Compounds, alkaloids, etc.....	4
4601	Drug manufacturing.....	Vapors.....	4
4602	Essential oils manufacturing.....	Dimethyl sulphate, essential oils, nitro benzol..	4
4606	Perfumery, flavoring manufacturing...	Chemicals and drugs.....	4
4607	Pharmaceutists.....	Carbon dioxide.....	2
4630	Aerated, mineral water manufacturing.	Fumes.....	10
4633	Carbonic acid gas manufacturing.....	Carbon monoxide, chloride of lime.....	2
4634	Oxygen, hydrogen manufacturing.....	Fumes, dust, infection.....	2
4651, 3	Glue, mucilage manufacturing.....	Chlorine, dust.....	2
4714	Soap powder manufacturing.....	Carbon disulphide, fumes.....	4
4740	Oil refining.....	Phenol, fumes, sulphuric acid.....	12
4741	Tar manufacturing (no coke oven operation).	Brass.....	4
4762	Cartridge manufacturing.....	Fumes.....	7
4763	Acetylene gas tank charging stations, operation.		

EFFECT OF ADDITION OF 1 PER CENT TO ALL ACCIDENT PURE PREMIUMS FOR OCCUPATIONAL DISEASES, BASED ON TOTAL COST OF ACCIDENTS IN MASSACHUSETTS, JULY 1, 1912, TO SEPTEMBER 30, 1913, SHOWING INDUSTRIAL HEALTH HAZARDS INVOLVED IN EACH SPECIFIED PROCESS—Concluded.

Code number.	Process.	Industrial health hazards.	Additional pure premium for occupational disease.
			<i>Cents.</i>
5461	Painting, decorating, exterior.....	Lead, turpentine, wood alcohol, benzine, naphtha.	9
5462	Glaziers (away from shop).....	Lead.....	8
5490	Painting, decorating, interior (away from shop).	Lead, dust from sandpapering, dampness, turpentine, wood alcohol, benzine, naphtha.	14
6250, 3	Caisson work.....	Compressed air, carbon dioxide.....	10
6254	Subway tunneling.....	Carbon dioxide.....	5
6300	Sewer building.....	Carbon dioxide, devitalized air.....	5
7206	Towel, etc., distributing.....	Infection.....	2
7500	Gas works.....	Carbon monoxide, cyanides, sulphuretted hydrogen.	3
7585	Sewer cleaning.....	Carbon dioxide, sulphuretted hydrogen.....	12
7590	Garbage works.....	Infection.....	2
8100, 5	Hide, leather dealers.....	do.....	2
8200	Paper stock, rag dealers.....	do.....	2
8801	Hospital employees.....	do.....	2
9210	Fumigation of buildings.....	Hydrocyanic acid, formaldehyde and potassium permanganate, sulphur.	6
9501	Painting, shop only.....	Lead, dust, fumes, dampness.....	17
9502	Sign painting, lettering, interior.....	As compared with ordinary painting, less lead in paint; less turpentine, benzine, naphtha in paint; little sandpapering; gloves worn.	9
9504	Enameling (no metal working).....	Lead, dust, heat, arsenic.....	15
9541	Sign painting, lettering, exterior.....	(See Sign painting, interior).....	7
9600	Taxidermists.....	Arsenic, mercury.....	6
9620	Undertakers.....	Formaldehyde.....	4

The committee found that the average expense ratio based on the transactions of the year 1914 was approximately 40 per cent of the compensation premium income. Inasmuch as both acquisition and administration expenses necessarily vary in the different compensation states, being a percentage of the gross premium income, the committee recognized that a flat loading for all States would be improper and inequitable. Accordingly the States were arranged in four groups, the percentage loading ranging from 35 per cent where the differential is 1.75 and over to 42½ per cent where the differential is 1.25 or less.

In studying catastrophe experience the committee considered certain serious accidents in the United States covering the period 1892 to 1913, inclusive, and assigned approximate values to each fatal and nonfatal accident using the total thus determined as a basis for an outside estimate. Assuming that the basic pure premium will provide for an inherent catastrophe hazard in particular classifications, such as, for example, coal mines, it was recommended that a loading of 2 cents per \$100 pay roll should be added to the gross premium of all classifications in New York and that a loading of 1 per cent per \$100 pay roll should be provided for other States.

MEMORANDUM ON ACCIDENT REPORTS FROM FEDERAL GOVERNMENT SHOPS.¹

BY H. S. HANNA.

The accident reports from the Government shops, under the Federal Compensation Act, show uniformly what appears to be an exceedingly large proportion of injuries terminating in the third week. In most instances the number reported as terminating in the third week is greater than the number for the second week. As such a distribution is contrary to all other experience of which there is record where accidents are fully reported, it has frequently been interpreted as indicating a practice on the part of injured workers of stretching short-time disabilities into the third week in order to benefit from the Compensation Act. The temptation to do so, it is argued, inheres in the form of the act, which allows no compensation for the first two weeks of disability but gives full wages for all of the time lost if the disability extends over 15 days. Thus, an injured worker who returns to work on or before the 15th day receives no compensation, whereas if he returns on the 16th day he receives compensation for the full disability period.

It is the contention in this article that, whatever may be the truth regarding the practice of malingering, the figures cited do not in any way establish its existence; that the excessive proportion of injuries reported as terminating in the third week, as well as other peculiarities in their distribution, can be much more logically explained on the ground that there is a gross deficiency in the accident reports for short-time disabilities. The reasons for this contention are briefly as follows.

The distribution of disabilities in the Government shops, according to week of termination, is shown by numbers in Table 1 and by percentages in Table 2. There are also shown the corresponding data for the iron and steel industry and the machine building industry. The information for these two industries was obtained in the course of current investigations of the Bureau of Labor Statistics. There is reason to believe that the data obtained are substantially accurate. Any error that may exist would be chiefly the result of failure to obtain full reports for the very short time disabilities and would thus show the accidents for the early weeks, principally the first week, as smaller than they should be.

A study of the data of these tables shows some striking facts. First, it will be noted that the percentage of injuries terminating in both the first and second weeks is very much smaller for the

¹ The Government shop data used as a basis for this discussion are from the tabulations made by the Bureau of Labor Statistics for its study, now in preparation, of Accidents and Accident Prevention in the Machine Building Industry. Similar tabulations are given in Bulletin No. 155 (report on operation of the Federal Compensation Act) but the form of tabulation there used does not permit of easy comparison with other industries.

Government shops than for the steel or machine building industries. Thus, taking the experience of the navy yards for 1914 as fairly representative of all the Government shop experience as reported, it appears that only 38 per cent of all reported injuries terminated in the first two weeks, whereas in the steel and machine building industries the percentages were, respectively, 74 per cent and 81 per cent. Nor is this the only striking peculiarity. For injuries terminating in the sixth week and later the navy yards show a percentage of 19 as against 6 and 5, respectively, in the steel and machine building industries.

These comparisons themselves would indicate probable error in the reports for the Government shops. The probability becomes even stronger when the comparisons are based upon the accident reports for the third week and over, all those for the first and second weeks being excluded. This is done in Table 3. It is then seen that when the first two weeks are excluded the experience of the Government shops is substantially the same as that of the steel and machine building industries. Particularly, it may be noted that the excessive percentage of Government shop disabilities terminating in the sixth week and over disappears, becoming 30 as against 25 and 27, respectively, for the steel and machine building industries.

This substantial harmony in the distribution of disability periods for three distinct industrial groups is a strong argument for the basic accuracy of such distribution. If so, there is nothing abnormal in the percentages for the Government shops for injuries terminating in the third and later weeks. For the short-time disabilities, however, the distribution for the Government shops is so abnormal that it seems impossible to explain it except on the ground of extremely faulty reporting.

The comparisons so far made have been in the form of percentages. If, in place of percentages, accident frequency rates are used the conclusion as to the incompleteness of reporting becomes even more evident. Table 4 shows the accident rates distributed by week of the termination of disability. Thus, the total accident rate for navy yards, 1914, was 112 per 1,000 300-day workers. Of these 112 accidents per 1,000 workers, 33 caused disability of less than a week, 9 caused disability of between one and two weeks, and so on. Rates of the same character are shown for the steel and machine building industries.

Comparing the data in the last three columns of the table, the most striking fact is, that for disabilities terminating in the third and later weeks, the accident rates in the navy yards are practically the same as those for the steel industry, the respective rates being: For the third week, 24 against 29; for the fourth week, 16 against 16;

for the fifth week, 9 against 12; and for the sixth and later weeks, 21 against 19. This close harmony of experience for the third and later weeks would suggest, with a reasonable degree of conclusiveness, that the true accident hazard in Government shops is about the same as in the iron and steel industry. If this is so, then there should be a similar harmony in accident rates for the first and second weeks, inasmuch as there is nothing in the character of the work in the Government shops to warrant radical departure from the experience of other industries. Examination of the accident rates for the first and second weeks, however, show extraordinary lack of harmony. For the first week the accident rate in navy yards for 1914 was only 33, according to the reports, as against 152 in the steel industry and in the second week only 9 as against 68.

Inasmuch as it is known that the accident rates of the steel industry err, if at all, in the direction of being too low for the early weeks, the conclusion seems clear that the rates as shown for the navy yards (as also for the arsenals) are entirely too low, an error that could only be explained by failure to report short-time disabilities in full. Estimating the true situation from the data of the table, it would appear that perhaps as many as three-fifths of the minor accidents in Government shops are not reported.

The above argument would seem to establish the fact that the peculiarities in the accident reports from Government shops are explainable on the ground of faulty reporting. Moreover, as regards the specific charge of malingering, the following point may be emphasized: If the practice of stretching disabilities from the first and second week to the third week (in order to benefit from the Compensation Act) existed in any considerable degree, whether from actual malingering or in the administration of the law, the accident rate for the third week would necessarily show an undue swelling as compared with rates for the other weeks. The data in Table 4, however, show no indication of this. For the navy yards, 1914, the rate for the third week is 24 and the highest rate in any of the years and shops listed is 28, as against a rate of 29 for the steel industry. In other words, the Government shops, as a whole, show slightly lower rates for the third week than does the steel industry. Similar comparison can not be made directly with the machine building industry, inasmuch as the total hazard for machine building is so much lower than for the steel industry. It may be noted, however, that the machine building rate for the third week is, in proportion to its lower total rate, not very different from the corresponding rate for the steel industry. Thus if the total rate for machine building (103) is raised to a level with the total of the steel industry (296) then the machine building rate for the third week would be approximately 22, which is but slightly lower than the navy

yard rate for 1914 and is higher than the Government shop rates in three of the six years listed.

ACCIDENT REPORTS IN GOVERNMENT SHOPS AND IN THE INDUSTRIES OF IRON AND STEEL AND MACHINE BUILDING.

Week in which disability terminated.	Government shops.						Iron and steel (1910).	Machine building. (1912).
	Arsenals.			Navy yards.				
	1912	1913	1914	1912	1913	1914		

Table 1.—Number of Disabilities Terminating in Specified Week.

First week.....	89	138	197	535	534	501	9,889	7,680
Second week.....	27	26	46	153	136	140	4,433	2,048
Third week.....	57	69	89	339	432	362	1,915	869
Fourth week.....	57	52	61	257	271	240	1,014	512
Fifth week.....	15	24	19	129	125	132	807	272
Sixth week and later.....	55	36	57	320	304	321	1,251	621
Total.....	300	345	469	1,733	1,802	1,696	19,309	12,002

Table 2.—Percentages.

First week.....	30	40	42	31	30	30	51	64
Second week.....	9	8	10	9	8	8	23	17
Third week.....	19	20	19	20	24	21	10	7
Fourth week.....	19	15	13	15	15	14	5	4
Fifth week.....	5	7	4	7	7	8	4	2
Sixth week and later.....	18	10	12	18	17	19	6	5
Total.....	100	100	100	100	101	100	100	100

Table 3.—Percentages (Excluding All Under the Third Week).

Third week.....	31	38	39	32	38	34	39	38
Fourth week.....	31	29	27	25	24	23	20	23
Fifth week.....	8	13	8	12	11	13	16	12
Sixth week and later.....	30	20	25	31	27	30	25	27
Total.....	100	100	100	100	100	100	100	100

Table 4.—Accident Frequency Rates (per 1,000 300-Day Workers).

First week.....	22	35	43	34	35	33	152	66
Second week.....	7	7	10	10	9	9	68	18
Third week.....	14	18	19	22	28	24	29	8
Fourth week.....	14	13	13	17	18	16	16	4
Fifth week.....	4	6	4	8	8	9	12	2
Sixth week and later.....	14	9	12	21	20	21	19	5
Total.....	75	88	101	112	118	112	296	103
Number 300-day workers.....	3,992	3,950	4,612	15,608	15,226	15,094	65,147	115,703

CONFERENCE OF STATE MINE INSPECTORS.

A conference of State mine inspectors and representatives of industrial compensation commissions, which was the result of an invitation issued by the Secretary of the Interior to the governors of the various States, was held in Washington, D. C., February 24

and 25. There were 30 State and Federal officials present in addition to a number of representatives of insurance organizations, and others interested in the matter of safety as related to industrial plants.

The meeting was an enthusiastic one and those present showed the spirit of cooperation, all apparently being in agreement as to the necessity of standardizing all data relating to the reporting of accidents, and their classification. One of the principal objects of the meeting was to bring about a cooperative arrangement between the various State organizations and Federal bureaus interested in the collection of statistics relating to the mining industry.

With the view of simplifying the collection of statistics and at the same time relieving the operator from rendering ~~so many~~ reports, it was the consensus of opinion that data should be so collected by the State organization as to be sufficient for all purposes. It was the purpose of this meeting so to standardize and broaden the collection of data as to include in one report sufficient information for the State mine inspector, the industrial compensation commission, and Federal bureaus.

The question of the calendar year was brought up and all agreed that the calendar year should be adopted in preference to any fiscal year, and the representatives of the States where the fiscal year is at variance with the calendar year pledged themselves to do all they could to bring about legislation to have the calendar year adopted. One of the arguments in favor of the calendar year was that with the enactment of the Federal income tax law a report under oath was required of the exact financial condition of the company on the 31st of December. This law, being Federal, applies to all of the States, and is an important argument in favor of the calendar year.

The principal question discussed at the meeting was the matter of standard forms for recording and publishing matter relating to mine equipment, labor, and accidents. For information relative to mine equipment the form should call for a directory of mines in actual operation during a calendar year; data relating to power equipment; ventilating equipment; mining methods; and haulage systems.

With reference to accidents, standard forms for the reporting of fatal and nonfatal accidents were discussed, to be so drawn that sufficient information would be available for anyone interested in the study of accidents. The forms proposed were applicable not only to coal and metal mines, but to metallurgical plants, quarries, and coke ovens.

The result of the meeting was the appointment of a committee to prepare an official report of the proceedings, which will be published by the Bureau of Mines as a bulletin and will contain copies of all of the standard forms as agreed to at the meeting or revised by the committee.

The coal-mining industry is represented on this committee by James E. Roderick, chairman, chief, department of mines, Harrisburg, Pa., and James Dalrymple, chief inspector of mines, Denver, Colo. The metal-mining industry is represented by George H. Bolin, State mine inspector, Phoenix, Ariz.; and W. B. Orem, State metal-mine inspector, Helena, Mont. The other members of the committee are L. W. Hatch, chief statistician, New York Industrial Commission, Albany, N. Y.; John Bohlander, president, Illinois State mining board, Pekin, Ill.; and Albert H. Fay, mining engineer, Bureau of Mines, as secretary of the committee.

There was a formal discussion concerning the standardization of mining laws and regulations as relating to safety in coal mines, the point being made that the miners are migratory and in going from one State to another a different set of laws, rules, and regulations is encountered, with which they are not necessarily familiar. It was agreed that the Bureau of Mines should draft a standard set of rules and regulations for coal mines, similar to that prepared by the bureau relating to metal mines and published as its Bulletin No. 75.

Another subject discussed was the adoption of certain universal danger signals, so that a miner from one State would meet the same type of signals in a mine in another State, and at once recognize its meaning.

WORKMEN'S COMPENSATION IN SOUTH AMERICA.

A few years ago the statement was frequently made that in the progressive industrial countries of Europe more adequate provision for redress for industrial injuries was being made than in the United States. Later it was said that even the less progressive countries were taking precedence in this respect; and while a majority of the States of the Union have now adopted the principle of compensation in lieu of that of liability, this country is not yet able to boast of any superiority as compared with others, some of them even of slight industrial development.

The latest countries to adopt the principle of workmen's compensation, of which the bureau has knowledge, are Argentina and Colombia. The former country passed an act dated September 27, 1915, establishing workmen's compensation and including in its scope factories, workshops, and industrial establishments in which any power other than human power is used for the work, and also forest and agricultural industries in which mechanical motive power is used. Transportation, mining, quarrying, and building work are mentioned, while the list may be extended to other industries or undertakings by the executive authority. All employees are covered whose annual

wages do not exceed \$3,000.¹ No responsibility exists where the accident was intentionally caused by the injured person, or resulted exclusively from his serious fault; so also when the accident was due to force majeure not connected with the work. The employer must furnish medicines and medical treatment until recovery, death, or a determination of permanent disability, unless the employee declines the provision offered. To entitle to compensation the disability must continue for more than six days. The compensation includes burial expenses not exceeding \$100, and a benefit equal to a thousand days' wages, but not more than \$6,000. This benefit is payable either in case of death or for permanent total disability. For permanent partial disability the compensation is to be 1,000 times the amount of the reduction of the daily wages due to the injury; while for temporary total disability half the daily wage is to be paid until the injured person is able to return to work. After the lapse of one year, if such total incapacity still exists, it is to be considered as permanent and so compensated, the first year's payment being considered as part of the total award. Employers may insure their liability under the act, but must not reduce the amount of the benefits provided in it. The executive power issues regulations and is to schedule injuries to be considered as total and partial disablements. Nonresident alien dependents are excluded from benefits.

Industrial diseases are compensated subject to proof of having originated exclusively from the class of work carried on by the victim during the year previous to his incapacity.

Administration and enforcement provisions are added, and compensation payments are exempted from execution, assignment, etc.

Another enactment bearing date of June 18, 1913, is applicable only to employment on public works. The provisions of this act for death and for permanent total disability are the same as in the later law above described. For permanent partial disability compensation is to be awarded according to the degree of incapacity, and a schedule of specific percentages is established ranging from 60 per cent of total disability for the loss of a right arm or hand, 50 per cent for the loss of a left arm or hand or of a leg or foot, 25 per cent for the total loss of an eye, and on downward for various fingers, the lowest rate being reached in a rate of 5 per cent for the loss of the great toe and 3 per cent for the loss of any other toe. No reference is made to industrial diseases in this act.

The statute of Colombia bears date of November 15, 1915, and is compulsory in its effect, being applicable to public lighting plants, waterworks, railways and street cars, breweries and distilleries, building and masonry work where more than 15 workmen are em-

¹ Amounts are stated in Argentina paper currency of a value of approximately 44 cents on the dollar.

ployed, mines and quarries, large boats, Government works, and manufacturing plants using mechanical power. The law of Colombia is less liberal than that of Argentina in respect to the cases excluded on account of fault, imprudence, and voluntary causative act of the injured person. There are four classes of compensation: For temporary incapacity, for which there must be payment of two-thirds of the wages for its duration; for permanent partial incapacity, calling for the payment of full wages for periods ranging from 90 to 140 days, according to its extent; for permanent total incapacity, calling for the payment of one year's wages; and for death within 60 days following the accident, calling for a payment of one year's wages to the heirs. In every case medical attendance is to be furnished at the employer's cost. Employers having less than \$1,000¹ capital are not required to pay compensation, but must furnish the prescribed medical attendance. Insurance of the prescribed obligations is authorized.

WAGES OF MINERS IN GERMANY DURING THE FIRST YEAR OF THE WAR.²

According to statistics recently published by the Prussian superior mine offices the average wages per shift paid to coal miners during the first four quarterly periods after the outbreak of the war were as follows:

WAGES PER SHIFT OF COAL MINERS IN GERMANY, 1914 AND 1915.

District.	1914		1915	
	Thrd quarter.	Fourth quarter.	First quarter.	Second quarter.
Upper Silesia.....	\$0.869	\$0.814	\$0.857	\$0.902
Lower Silesia.....	.828	.807	.812	.857
Ruhr district.....	1.242	1.197	1.233	1.283
Saar district (State mines).....	1.052	1.012	1.004	1.026
Aix la Chapelle district.....	1.142	1.095	1.114	1.138
Left Lower Rhine district.....	1.307	1.271	1.278	1.349

From the above table it is evident that during the second half of 1914, i. e., during the period in which, on account of the outbreak of the war, the increase of the cost of living was largest, the wages of coal miners decreased. The miners' federations made representations to the minister of commerce which resulted in pressure being brought to bear on the mine owners to increase the shift wages of their workmen, and in the second quarter of 1915 small increases were granted in all mines. In the State mines, however, the average

¹ The Colombian gold dollar has the same value as that of the United States; the paper dollar, just above 95 cents.

² Die Entlohnung der Bergarbeiter im ersten Kriegsjahre in Soziale Praxis und Archiv für Volkswohlfahrt. Berlin, 1915, Vol. XXV, No. 1, Oct. 28, 1915, p. 89.

wage paid during the second quarter of 1915 is still below that paid during the corresponding quarter of 1914.

In considering the average wages shown here it should not be forgotten that the character of the working force in the coal mines has changed since the beginning of the war. Large numbers of coal miners were called to military duty and unskilled juvenile and female workers took their places, which naturally decreased the average working efficiency, a fact which became evident in the earnings of contract workers paid on a tonnage basis. The wages of miners proper, i. e., miners and apprentice miners working below ground, show larger increases than those of unskilled workers.

The average daily wages for the individual classes of mine workers during the second quarter of 1914 and of 1915 are shown in the table following:

AVERAGE DAILY WAGES OF MINE WORKERS IN GERMANY DURING THE SECOND QUARTER OF 1914 AND OF 1915.

District.	Average daily wages of—									
	Miners proper.		Other workmen employed below ground.		Workmen employed above ground.		Male juvenile workers.		Female workers.	
	1914	1915	1914	1915	1914	1915	1914	1915	1914	1915
Upper Silesia.....	\$1.159	\$1.257	\$0.840	\$0.909	\$0.771	\$0.838	\$0.295	\$0.336	\$0.309	\$0.343
Lower Silesia.....	.935	.978	.830	.871	.754	.802	.319	.359	.412	.431
Ruhr district.....	1.473	1.585	1.075	1.116	1.040	1.100	.343	.393	.....	.....
Saar district (State mines)....	1.209	1.209	.983	.981	.916	.933	.340	.367	.....	.....
Aix la Chapelle district.....	1.292	1.342	1.031	1.061	.981	1.026	.390	.400	.....	.....
Left Lower Rhine district.....	1.461	1.552	1.188	1.216	1.050	1.109	.376	.376	.....	.....

RESTRICTIONS ON THE OUTPUT OF TEXTILE ESTABLISHMENTS IN GERMANY.

According to the Reichs-Arbeitsblatt (November, 1915), the great shortage of raw materials for textile manufacture in Germany caused the Federal Council to enact measures limiting the output of textile establishments. A decree of November 7, 1915, provides that in industrial establishments in which yarns, threads, fabrics, plaited or knit goods, cordage, machine lace, wadding, or felt are entirely or partially manufactured from cotton, wool, shoddy, flax, jute, ramie, hemp, or other cordage fibers, workmen may be employed only during a maximum of five days per week, while the daily hours of labor may not exceed the average daily hours of labor current during June, 1915, and may in no instance be in excess of 10 hours per day exclusive of rest periods. The central State authorities, if they so desire, may place further limitations upon the daily hours of work and the number of days per week in establishments of the kind indicated.

For infractions of the decree by employers, fines are authorized up to 1,500 marks (\$357) or imprisonment up to three months.

An article in *Soziale Praxis* (Berlin), of November 11, 1915, notes that these restrictions are working great hardship on the textile workers, inasmuch as in normal times their wages are generally considerably lower than those of workers in other industries. Weekly wages of from 7 to 10 marks (\$1.67 to \$2.38) for female workers, and from 14 to 15 marks (\$3.33 to \$3.57) for male workers represent the average wages paid in some important textile districts.

These wages in normal times, it is claimed, are hardly sufficient for a bare existence at a minimum standard of living, while few of the workers can manage to make any savings. Their present lessened earnings, having regard for the prevailing high cost of living, have consequently made their condition so precarious that numerous municipalities have been compelled to give them pecuniary unemployment aid; but as municipal aid was in frequent instances lacking or insufficient, the Federal States have proposed ameliorating measures. A Government committee has been formed to deal with the problem in Saxony and also in Bavaria and some of its districts. In Bavaria it is proposed to give aid to all unemployed and part-time workers through the municipalities and district towns. Two-thirds of the required fund are to be raised by the Empire and State while employers have promised to contribute one-sixth and the municipalities themselves are to raise the remaining one-sixth.

In Baden, Bavaria, and Saxony recent reports indicate that textile workers are now receiving adequate assistance, while some difficulty has been encountered in the matter in Prussia. In Silesia, Prussia, it is reported that the problem is being met by establishing sewing rooms and distributing work to be done at home.

MORTALITY AND MORBIDITY OF ITALIAN IRON AND STEEL WORKERS.

Based on statistics of the morbidity and mortality of the working force of an iron and steel company (*societa siderurgica*) of Savona, Italy, during the two decades 1894-1913, Dr. A. Peri¹ has made an interesting contribution to the study of the hygiene of iron and steel workers. After 15 years of medical practice, especially among iron and steel workers in the large industrial center, Sestri Ponente, the author has come to the conclusion that the iron and steel industry is a comparatively healthful one, as shown by the longevity of the great majority of the workers and their resistance to infection in general, particularly tuberculosis.

¹ La patologia professionale degli operai siderurgici, Dr. A. Peri in *Bollettino dell' Ufficio del Lavoro* (semimonthly issue): Rome, 1915, Vol. III, No. 20, Oct. 16, p. 256.

The author makes a study of 23,887 diagnoses collected between 1894 and 1913 by the workers' aid fund in the establishment at Savona. He attributes only a relative value to these diagnoses, as they could not subsequently be confirmed or modified by the physicians who had entered them in the register on the first day of sickness. Moreover, it is only since 1904 that the total number of workmen employed in the establishment is known for each year, so that the rate of morbidity and of mortality can only be determined for the last decade.

During the 20-year period under review, the annual average number of cases of sickness was 1,194, and that of deaths 8. The lowest morbidity, with 300 cases of sickness, was established for 1894 and the highest, with 2,028 cases of sickness, for 1909. The death rate was lowest in 1897 (2 deaths) and highest in 1913 (18 deaths). The death rate per 100 sick workmen was lowest in 1897 and 1899 (0.3 per cent) and highest in 1896 (1.2 per cent), while the average rate was 0.6 per cent. During the second decade the death rate computed per 100 workmen varied between 0.1 in 1906 and 1908 and 0.5 in 1904 and 1913, the average being 0.3.

The rate of morbidity for the last decade varied between 41 per 100 workmen in 1905 and 64.2 in 1907, the average rate for the decade being 53.4. The morbidity risk is, therefore, rather high, as more than half of the employed workmen were taken sick each year. If, however, the combined cases of sickness are examined, it is found that the most frequently observed cases are not of a serious character.

Iron and steel workers must possess physical qualities and special aptitude not always required for other occupations. They must be of robust constitution, have considerable development of the muscles, and sufficient organic resistance to be able to perform fatiguing tasks in overheated surroundings. Normal visual and aural capacity is required. Those employed in rolling mills must, moreover, possess great agility in their movements, a true eye, and promptness in action.

The author calls attention to the frequent cases of malnutrition observed in these workers after several years of employment. Steel workers, especially, are often found to suffer from excessive corpulency and obesity; cases of chronic articular and muscular rheumatism, gout, vitiated metabolism, and diabetes are quite frequent.

The heavy tools and working materials produce occupational stigmata on the tissues, especially on the epidermis of the palm of the hand and the inside of the fingers, such as bursæ, tenosynovitis (combined inflammation of a tendon and of its sheath), etc., and in the case of old iron and steel workers, even incomplete extension of the fingers, which gives to the hand a clawlike appearance.

Acute carbon-monoxide poisonings, which sometimes result in death, are frequent among blast furnace workers, but very rare among workers in the other departments, only a few cases having occurred among attendants of gas generators in the steelworks.

Cases of neuralgia and lumbago are also frequent, which the author ascribes to the predisposition of individuals with vitiated metabolism to the influences of the rapid changes of temperature. Cases of influenza are also numerous. Under this diagnosis are included several forms of fever with vague pains, especially in the loins, which some physicians diagnose as so-called rheumatic fever.

Cases of hernia are more frequently found among iron and steel workers than among workers in other industries.

The rate of infectious diseases, especially tuberculosis in its various forms, is very low, only 11.3 per 1,000 of all cases being cases of tuberculosis of the lungs. The diseases of the digestive system show a rate of 259.9 per 1,000 cases of sickness.

To throw further light on the forms of sickness characteristic of iron and steel workers, the author concludes, would require a medical examination of the workers.

EIGHT-HOUR LAW IN URUGUAY.

The *Diario Oficial de la Republica Oriental del Uruguay*, volume 41, No. 2971, published the text of an eight-hour law enacted on November 17, 1915, and becoming effective three months from the date of publication.

The act makes it an offense for any person to work more than eight hours per day in any factory, workshop, shipyard, stoneyard, and earthworks or in harbors, on coasts or on rivers, or as clerks and laborers in industrial or commercial establishments, in railroad and street railway service, in loading and unloading ships, and in all occupations similar to those mentioned, as well as on public works.

The executive authority may permit an extension of the hours in exceptional cases, but in no case may the hours of actual labor exceed 48 for each six days' labor.

Daily rest periods are to be determined by the executive authority according to the needs of each industry.

No person employed the full legal hours in an establishment is permitted to be employed in any other establishment, but a person employed in one establishment for only a portion of the hours named may do additional work for another employer up to eight hours per day altogether.

Both the employer and the employee are subject to penalties for violations of the law in regard to overtime work, and the employer

is required to furnish all necessary information in that connection demanded by the labor inspectors, and becomes liable to penalties for refusing to give such information or for any obstruction in the exercise of the inspector's duties.

For the enforcement of the law 25 special inspectors are provided, and placed under the supervision of the Treasury Department. The law provides that the inspectors shall receive 1,800 pesos (\$1,861) each a year if employed in Montevideo, and 900 pesos (\$1,003) if employed elsewhere.

PUBLICATIONS OF THE INTERNATIONAL ASSOCIATION OF UNEMPLOYMENT AND OF ITS NATIONAL SECTIONS.

The International Association on Unemployment was organized in 1910 as a result of the joint efforts of numerous specialists and experts in the field of unemployment, students of the problem representing both employers and employees, municipal administrative officers and others dealing with problems of unemployment and their relief. The way may be said to have been prepared, however, for such an organization by the congress which had been held at Milan, Italy, in 1906,¹ as a part of a general international exposition. The International Congress of 1906 was called together by the Milan welfare society, Umanitaria. The congress of 1910, known as the Second International Congress on Unemployment—that of 1906 being known as the first—was called as a result of the efforts of a committee which met in Paris in 1909, composed very largely of representatives from Belgium, France, and Germany, university professors and official administrators, who were interested in the subject of unemployment. This committee perfected an international committee which organized the congress and prepared its program. The proceedings and papers of the congress were published in 1911.²

As stated in the by-laws which were drafted and adopted at the 1910 congress at Paris, the object of the association is to coordinate all efforts made in different countries to combat unemployment. Among the methods adopted to realize this purpose there may be noted the following: (1) The organization of a permanent international office to centralize, classify, and hold at the disposition of those interested, the documents relating to the various aspects of the struggle against unemployment in different countries; (2) the organization of periodical international meetings, either public or private; (3) the organization of special studies on certain aspects of the problem of unemployment and the answering of inquiries on these

¹ *Le Chômage*, publié sous les auspices de la Société Umanitaria. Paris, 1907. 273, [1] pp.

² *Compte-rendu de la Conférence Internationale du Chômage. Internationale Konferenz über Arbeitslosigkeit. International Conference on Unemployment.* Paris, 18-21 septembre, 1910. Paris, 1911. 3 vols.

matters; (4) the publication of essays and of a journal on unemployment; (5) negotiations with private institutions or the public authorities of each country with the object of advancing legislation on unemployment and obtaining comparable statistics and possibly agreements or treaties concerning matters of unemployment.

The membership consists of those attending the international congress of 1910, and those subsequently elected by the administrative committee.

The association is directed by a committee whose members are elected by the members of each of the national sections of the association. Each national association counting at least 10 members is entitled to one delegate on this committee and to one additional delegate for every 25 additional members, but not exceeding seven delegates in all. This committee appoints the executive officers of the international association, consisting of a president, vice president, secretary, assistant secretary, and treasurer, who are ex officio members of this committee. The committee and officers remain in office from one congress to another and may be reelected.

It is the purpose of the International Association on Unemployment to cooperate with the Permanent International Committee on Social Insurance and with the International Association for Labor Legislation, and eventually with all societies of similar aim. The right of representation at the periodical congresses of the association, on the committee, and possibly among the officers of the association, may be granted to these cooperating associations. It is proposed to cooperate with these associations also in the holding of meetings and perhaps to collaborate with them in the issue of certain publications. In actual practice it has worked out in some instances that the national sections of the International Association for Labor Legislation or of the Permanent International Committee on Social Insurance form likewise the national section of the International Association on Unemployment.

The first committee of the international association was chosen at the congress of 1910, which met in Paris and consisted of representatives from the following countries: France 4, Great Britain 4, Germany 4, Belgium 4, Switzerland 3, Holland 3, United States 3, Austria 2, Hungary 2, Italy 3, Sweden 1, Denmark 1, Russia, 1, Finland 1, Spain 1, Norway 1, Luxemburg 1, Australia 1, and Argentina 1.

The first general meeting of the association was held at Ghent, September 3 to 6, 1913. It is sometimes known as the Third International Congress on Unemployment, as it was in reality a continuation of the first one at Milan in 1906 and the second one at Paris in 1910. No congress has since been held. The international com-

mittee, the directing body of the association, however, held an international conference from September 6 to 9, 1912, at Zurich, Switzerland, as part of a so-called "social week," during which time there were in session at that place the International Association for Labor Legislation, the Second International Congress on Home Work, and the Third International Conference on Social Insurance.

The list of the publications of the international association and of its national sections, which follows, is in the nature of an annotated bibliography and has been cast into library cataloging form. Since the outbreak of the war, issues of periodicals of the international association and its national sections have been somewhat irregular in their appearance, while the bulletin of the international association has ceased to appear.

International Association on Unemployment. Bulletin trimestriel de l'Association internationale pour la lutte contre le chômage. Quarterly Journal of the International Association on Unemployment. Vierteljahreshefte der Internationalen Vereinigung zur Bekämpfung der Arbeitslosigkeit. Rédacteur en chef, Max Lazard, 34, rue de Babylone, Paris. Année 1 to date. 1911 to date. Paris, 1911 to date.

The first issue of the bulletin appeared for the third quarter of 1911. It is devoted primarily to insurance against unemployment. Bulletin No. 2, for the last quarter of 1911, relates particularly to employment offices, their history and operations.

No. 1, 2 (consolidated issue) of 1912 is devoted to unemployment in its relation to the employment of children; No. 3, to unemployment and the movement of labor, and the placing of agricultural laborers; No. 4, to proceedings of the third meeting of the international committee on unemployment.

No. 1 of 1913 is devoted to unemployment relief principally; No. 2, to statistics of unemployment; No. 3, to international inquiry relative to the work of employment offices; No. 4, to unemployment and the movement of labor.

Nos. 1 and 2 of 1914 are devoted to a report of the proceedings of the general meeting of the association at Ghent, September 5 and 6, 1913; No. 2 also contains reports on unemployment insurance and on public works in their relation to unemployment.

[A letter to this Bureau from the editor states that the bulletin will not appear during the war.]

——— *Statuts—statuten—statutes. Ghent, 1910. [10] pp.*

Contains the by-laws of the International Association on Unemployment, printed in French, German, and English, together with a list of the members of the first international committee and its officers.

——— *Statuts—statuten—statutes. [Ghent, 1911.] 114 pp.*

Contains the by-laws of the international association, printed in French, German, and English, also a list of the members of the international and national committees and their officers, together with a list of the founders of the association.

——— *General meeting, Ghent, 1913. First general meeting....Ghent, 3-6. September, 1913. [Ghent, 1913.] [30] pp.*

This pamphlet is issued in French, German, English, and Dutch and contains the announcement of the general meeting of the association to be held at Ghent, Belgium, September 3-6, 1913; also a list of the executive officers of the association, a list of the members of the international committee, and a statement of the general subjects to be discussed at the meeting. The by-laws of the association are appended.

——— *General meeting, Ghent, 1913. Rapports. Paris, 1913, 1914. 4 v.*

——— *Procès-verbaux des réunions et documents annexes. Paris, 1914. 204 pp.*

International Association on Unemployment. Supplement aux procès-verbaux des réunions. Rapport de M. Edouard Fuster sur l'Assurance-chômage. Paris, 1914. 36 pp.

The *Rapports* are four in number and have also been published in the issues of the quarterly bulletin of the association. The first is a preliminary report on international unemployment statistics, prepared for the use of the joint conference, at Zurich, September 9, 1912, of the special committees appointed by the International Statistical Institute and the International Association on Unemployment. It was prepared by Louis Varlez. It contains, also, schedules used by various official bodies in different countries engaged in collecting unemployment statistics. The second contains the result of the international inquiry into unemployment offices, their organization and statistics of operations; the third is the report of the investigations in different countries on the relation of unemployment and the mobility of migratory seasonal labor; and the fourth treats of unemployment insurance, and unemployment in its relations to public works, their organization and execution.

The *Procès-verbaux* are the proceedings of the meeting of 1913 at Ghent and contain the text of all resolutions passed, these appearing in French, English, and German.

The supplement to the proceedings is a report on unemployment insurance. In the resolutions of the general meeting Mr. Fuster was asked to continue his investigations on the subject.

——— *International committee. [Miscellaneous pamphlets.] Ghent, 1912. (1) Rapport général . . . Agenda de la séance, 1912. (2) Rapport préliminaire sur la statistique internationale du chômage, par L. Varlez, 1912. (3) Rapport sur la matière de la bibliographie du chômage, par M. Mrs. Szabo, Varlez, 1912. (4) Rapport de M. W. F. Treub . . . sur l'influence que peut exercer sur le chômage le mode d'exécution des travaux publics, 1912. (5) Rapport sur le chômage et des migrations internationales de travailleurs . . . par I. Ferenczi, 1912. (6) Rapport . . . relatif à la statistique internationale du placement, 1912.*

These six unnumbered pamphlets, issued by the international committee which acts as a governing body of the International Association on Unemployment, contain the summaries of the reports made to the international committee which met at Zurich, Switzerland, September 6-9, 1912. As arranged, when bound in one volume, No. 1 contains a report of the work of the committee and the program for its meeting of 1912; No. 2, a preliminary report upon the statistics of unemployment by Louis Varlez, secretary of the special committee appointed jointly by the International Institute of Statistics and the International Association on Unemployment; No. 3, principles involved and a tentative outline for the preparation of an international bibliography on unemployment, reported in connection with the proposal by the association to issue through the municipal library of Budapest, Hungary, a comprehensive bibliography on unemployment. The outline classification of this bibliography consists of two parts. The first part deals with unemployment theoretically and descriptively, while part two relates to remedies for unemployment; No. 4, a report by M. W. F. Treub, president of the Dutch section of the international association, discussing the relation of unemployment to the execution of public works; No. 5, the problem of unemployment in its relation to the international movement of labor, by Dr. I. Ferenczi, secretary of the Hungarian section; No. 6, a report of the secretary general on the plan submitted by Drs. Freund and Zacher relative to international employment office statistics.

——— *American section. Unemployment: a problem of industry, New York, 1914. 295 pp.*

Under this title was issued volume 4, No. 2, May, 1914, of the American Labor Legislation Review, which contains the proceedings of the first national conference on unemployment, in New York City, February 27 and 28, 1914.

At the close of the fifth annual meeting of the American Association for Labor Legislation, in 1911, a committee was appointed to represent that organization in its relations with the International Association on Unemployment. This committee was in turn represented subsequently in September, 1912, at the international conference in Zurich, Switzerland. Growing out of this cooperation with the International Association on Unemployment there was formed out of the American committee the American section of the International Association on Unemployment, which section is practically identical with the American Association for Labor Legislation.

The program of the conference included the discussion of organization to combat unemployment; the irregularity of employment; public responsibility for the existence of unemployment; insurance against unemployment; constructive proposals; employment exchanges in the United States; present status of unemployment insurance; and new legislation on unemployment exchanges. There is appended a brief list of references on unemployment, employment exchanges, and unemployment insurance prepared in cooperation by the American Association for Labor Legislation, the United States Bureau of Labor Statistics, and the Library of Congress.

Resolutions of the conference urged the establishment in the Federal Department of Labor of a bureau of distribution, with power to establish employment exchanges throughout the country to supplement the work of State and municipal bureaus, to act as a clearing house of information, and to promote the distribution of labor. Upon the State legislatures the conference urged the establishment or reconstitution of State free employment agencies conforming to certain essential principles as laid down.

International Association on Unemployment. American section. A practical program for the prevention of unemployment in America, submitted for criticism and suggestions by John B. Andrews. New York, American Association on Unemployment, 1914. 18 pp.

Consists of an outline of a general scheme of economic reconstruction and organization relating to the problem of unemployment. The outline presents six principal topics: (1) Regularization of industry; (2) establishment of public employment exchanges; (3) systematic distribution of public work; (4) prevention or distribution of surplus labor; (5) unemployment insurance; (6) constructive care of the unemployed.

——— *Austrian section. Systeme der arbeitslosenunterstützung: Vortrag gehalten in der Gesellschaft Oesterreichischer Volkswirte von Hofrat Prof. Dr. E. Schwiedland. Vienna, 1914. 16 pp. (Flugheft 1.)*

The report of a lecture before the Austrian Economic Association. Dr. E. Schwiedland suggests a system of subsidized unemployment insurance, without contribution from the workers, which will include both organized and unorganized workmen. It is proposed to pay municipal subsidies to organized workmen through the municipal employment exchanges. He notes that this system differs from the three already in existence, commonly known as the Ghent system, the Scandinavian system, and the English system.

——— *Belgian section. La lutte contre le chômage. Organe de la Section belge . . . Année 1, May, 1912-1914. Ghent, 1912-1914.*

This is the official periodical organ of the Belgian section of the International Association. The first number appeared for May, 1912, and three numbers completed the year. For 1913 there appeared three issues; and only one number (January to March) appeared in 1914, since which time it has ceased to appear. The usual articles relating to unemployment, labor exchanges, unemployment insurance, irregularity of employment, and the execution of public works in relation to unemployment appeared in its pages, with particular reference, however, to Belgium. Each number contains book reviews and bibliographical notices.

International Association on Unemployment. Dutch section. Tijdschrift der Nationale vereeniging tegen de werkloosheid. Organ der Vereeniging van nederlandsche arbeidsbeurzen . . . jaarg. 1 to date. 1912 to date. Haarlem, Boissevain en Co., 1912 to date.

This periodical constitutes the organ of the National Association on Unemployment for the Netherlands, and of the association of Dutch employment exchanges; the former of which is the Dutch section of the International Association on Unemployment. It appears in four or five issues each year, although occasionally some issues are consolidated. The first issue appeared in 1912, while the latest received in the Bureau is that for January, 1916. The usual topics on unemployment in its various aspects are discussed in its pages, with particular reference, however, to the Netherlands. Each number contains book reviews and bibliographical notices.

———*French section. Le placement public à Paris, situation actuelle et projets de réforme, par Louis Varlez, Ch. Picquenard, Darcis Georges Alfassa et Max Lazard. Paris, 1913. 325 pp.*

This volume contains the stenographic reports of five public conferences held under the auspices of the French section in March, 1912, at the École des Hautes Études Sociales. There were discussed the following topics: German and English employment office methods; the placement of labor in Paris; abuses and defects in the work of employment offices; the placement of women and children; public employment offices of Paris and the program of the French association on unemployment; Methods of the public employment office of Berlin.

——— *Circulaires du secrétariat général. No. 6-7, 9-12, 15-19, 22-33. No. 6-19 not monographs; No. 22, La guerre et le chômage en France, 1915; No. 23, Le chômage et la guerre en Grande-Bretagne; No. 24, La lutte contre le chômage au Danemark pendant la guerre; No. 25, Le placement public en Grande-Bretagne pendant la guerre; No. 26, La guerre et le chômage en Norvege; No. 27, Le recrutement de la main-d'œuvre agricole en France; No. 28, La guerre et le chômage aux Pays-Bas; No. 29, L'organisation du placement public en France; No. 30, La guerre et le chômage en Espagne; No. 31, L'orientation professionnelle de la jeunesse ouvrière et la crise de l'apprentissage; No. 32, Note sur l'assemblée générale statutaire du 29 Octobre 1915; No. 33, La guerre et le chômage en Italie.*

These are fugitive circulars which, beginning with No. 22, have appeared as separate monographs, while numbers prior thereto have dealt with two or more subjects discussed at the meetings of the french association on unemployment. The contents of the monographs are as follows: No. 22, The war and unemployment in France; No. 23, The war and unemployment in Great Britain; No. 24, The struggle against unemployment in Denmark during the war; No. 25, Work of public employment exchanges in Great Britain during the war; No. 26, The war and unemployment in Norway; No. 27, Recruiting agricultural labor in France; No. 28, The war and unemployment in the Netherlands; No. 29, The organization of public employment offices in France; No. 30, The war and unemployment in Spain; No. 31, Vocational guidance of youth and the present crisis in the evolution of apprenticeship; No. 32, The general meeting of October 29, 1915; No. 33, The war and unemployment in Italy.

——— *German section. Schriften der Deutschen gesellschaft zur bekämpfung der arbeitslosigkeit. Berlin. No. 1. Die Vergebung der öffentlichen arbeiten in deutschland im kampf gegen die arbeitslosigkeit, by Dr. Ernst Bernhardt. Berlin, 1913. 55 pp. No. 2. Der gegenwärtige stand der arbeitslosenfürsorge und versicherung in Deutschland. Berlin, 1912. 138 pp.*

The first volume noted above is the beginning of a series of monographs published by the German section of the International Association on Unemployment. In pursuance of a resolution of the international association, the individual national sections had undertaken an investigation as to the influence of the proper distribution of public works upon unemployment. The result of the investigation made in Germany is submitted under the principal heads following: The problem of the movement of

labor and the principles for its solution; Measures taken in that respect by public corporations; Present methods employed by the Empire and the Federal States, including the State administration of railroads; The economic and technical difficulties connected with the movement of labor in relation to the condition of the labor market; Distribution of public works in large German municipalities in periods of economic depression; Difficulties in the movement of labor as experienced by municipalities; The awarding of public contracts by trades, and its importance for the state of the labor market.

The second monograph gives the results of an inquiry into the development and present state of the care for the unemployed and of unemployment insurance in German municipalities and towns. It is an historical and statistical account of the development of institutions dealing with the problems of unemployment and its relief. The text of communal ordinances regulating the care for the unemployed is reproduced in an appendix.

International Association on Unemployment. Hungarian section. A Munkanélküliség elleni küzdelem magyarországi, egyesületének kiadványai. Budapest, 1911-1915. (Publications of the Hungarian Association on Unemployment.)

These are serially numbered monographs, constituting the publications of the Hungarian section, nine of which have already appeared. The first number, which appeared in 1911, contains miscellaneous groups of articles relating to the international conference of 1910 at Paris, an account of the international association and of the Hungarian section, together with the by-laws of these two associations. The contents of Nos. 2 to 9 are as follows: No. 2, 1913, Unemployment and the migration of laborers; No. 4, 1914,¹ The economic situation and unemployment (proceedings of the Hungarian section, Apr. 30, 1913); No. 5, 1914, Unemployment and labor in the munition industries (September conference, 1914); No. 6, 1915, Unemployment and crop insurance, 1914 (February conference, 1915); No. 7, 1915, The war and its effect on the earning capacity of women (March conference, 1915); No. 8, 1915, Unemployment and the disturbed conditions of work in agriculture in Hungary, by Béla Balkanyo; No. 9, 1915, The economic status of incapacitated persons (April conference, 1915).

————— *A Munkanélküliség elleni küzdelem. A Nemzetközi egyesület magyar osztályának közleményei. Budapest, 1912 to date. (The struggle against unemployment; organ of the Hungarian section of the International Association on Unemployment. Ed. Dr. Imre Ferenczi.)*

This is the official periodical organ of the Hungarian section of the international association, the first volume of which appeared December, 1912, with the latest issue received, that of June, 1915. There are discussed in its pages the usual problems of unemployment in its various aspects. Particular reference is, however, given to unemployment among agricultural laborers, as farming plays such a large share in the economic situation in Hungary.

¹ No. 3 is lacking from the Bureau's series.

OFFICIAL REPORTS RELATING TO LABOR.

UNITED STATES.

California.—*Industrial Welfare Commission. Report on wage board in the fruit and vegetable canning industry. [San Francisco, 1916.] 16 pp.*

Minimum wages adopted by the wage board January, 1916, for women employees in the canning industry, after presentation of recommendations by both employers and employees. Hearings are to be held by the commission before the final adoption of the scales recommended by the board.

— **LOS ANGELES.** *Municipal Free Employment Bureau. Second annual report, 1914-15. [Los Angeles, 1915.] 16 pp.*

The bureau was established on January 2, 1914, and this is a report of its operations for the fiscal year ending June 30, 1915. The work of the bureau is divided into three divisions—commercial, industrial for men, and household for women.

The following summary shows the results of the bureau's operations for the year:

Divisions.	Persons registered.	Applications by employers.	Positions filled.
Industrial (men).....	11,917	19,315	18,677
Household (women).....	6,095	6,762	5,446
Commercial.....	4,080	1,825	1,215
Total.....	22,092	27,902	25,338

Based upon the number of vacancies registered by employers and the positions filled, the bureau can claim 90.8 per cent efficiency.

Massachusetts.—*Bureau of Statistics. Ninth annual report on the State free employment offices for the year ended November 30, 1915. Boston, 1916. 43 pp.*

The four State free employment offices of Massachusetts are located, respectively, at Boston, Springfield, Worcester, and Fall River. During the nine years since the first office was opened in Boston 197,041 positions have been filled by them. During the first year of their operations, 1907, there were filled 15,510 positions. The maximum filled, 29,117, was in 1913. The positions filled by all offices during the year ended November 30, 1915, were distributed among several industries as follows:

NUMBER OF MALES AND FEMALES SECURING POSITIONS THROUGH THE STATE EMPLOYMENT OFFICES DURING YEAR ENDED NOV. 30, 1915.

Occupations.	Males.	Females.	Total.
Agricultural pursuits.....	1,798	.....	1,798
Apprentices.....	166	6	172
Domestic and personal service.....	6,270	9,925	16,195
Manufacturing and mechanical pursuits.....	4,631	1,631	6,262
Professional service.....	28	8	36
Trade and transportation.....	1,697	435	2,132
Other trades.....	63	31	94
Total.....	14,653	12,036	26,689

These conditions show an improvement over conditions prevailing during the preceding year, an improvement which is also substantiated by the personal report of the different superintendents.

The operations of the four offices during the year ending November 30, 1915, are contained in the following table:

VOLUME OF BUSINESS DONE BY STATE EMPLOYMENT OFFICES DURING YEAR ENDING NOV. 30, 1915.

Classification.	Working days.	Number of applications from employers.	Aggregate number of persons called for.	Positions offered.	Positions filled.	Per cent of positions filled of persons called for.
Boston.....	304	15,130	17,847	30,532	14,491	81.20
Springfield.....	¹ 305	6,296	7,571	9,615	6,106	80.65
Worcester.....	¹ 305	5,926	7,316	10,365	5,150	70.39
Fall River.....	¹ 279	1,104	1,172	1,068	942	80.38
Total for four offices.....	.....	28,456	33,906	51,580	26,689	78.71

¹ Springfield, Worcester, and Fall River offices had 26 working days in June.

The actual expenses of the four offices for the year were \$33,420.51, there having been appropriated \$35,500.

The director of the bureau of statistics, under whose jurisdiction the offices are placed, recommends that a special board be established to have charge of these offices in the future on the ground the management of such offices should be a specialized function.

Massachusetts.—*State Board of Labor and Industries. Licensed workers in industrial home work in Massachusetts; analysis of current records under the auspices of the Bureau of Research, Women's Educational and Industrial Union. Boston, 1915. 153 pp. (Industrial Bulletin No. 4.)*

In 1913 the State board of labor and industries organized a home-work division and employed investigators to enforce the home-work law. In July, 1914, the attorney general held that these investigators were inspectors under the law, and as the full quota of authorized inspectors had been filled the continued employment of the home-work investigators would have been illegal. The division was therefore discontinued. However, as a result of its activities during 10 months a considerable amount of data concerning home work in Massachusetts was collected. These have now been analyzed and presented in the work listed above.

In the 10 months of its existence the home-work department made 11,830 visits for the purpose of granting licenses and of regulating conditions under the home-work act. As a result 6,218 persons out of the 7,765 applying received licenses. Only 175 applicants were refused licenses and for the following reasons: Because of disease, 23 per cent; poor sanitation, 51 per cent; other causes, 26 per cent. But as other applicants did not desire work or had moved or given the wrong address, an additional 1,372 should be added to the above number, so that 1,547, or 20 per cent, failed to secure licenses.

The analysis of the schedules of inspection collected by the home-work division during its existence threw light upon the different phases of home work; it disclosed the location of home workers in the State; the location and character of the industries giving out home work; housing conditions; conditions of the workroom; nativity of workers; nativity and age of family members; the share and responsibility of mothers in the work of family groups; in short, the economic status of the families in general.

The results of the investigation show that between 6,000 and 7,000 licenses for home work are granted each year; that 8,000 applications are received each year; that the granting of licenses requires about 12,000 visits, or about two for each license (practically one-half of the visits are futile); that the proportion of refusals because of disease, poor sanitation, etc., is very small (about 2 per cent of the applications in 10 months); that the number of revocations is small (4.8 per cent of the number granted); that the grade of the family as determined by condition and cleanliness of the house, yard, and workroom and of the individual occupants, to which licenses are granted, is good. As to the location of home-working industries it appears that the workers are concentrated in the metropolitan area of Boston, although a large number of workers are scattered throughout the State. Cities and towns where licenses are granted are grouped mostly in the eastern part of the State.

The industries which manufacture wearing apparel are the only ones in which home workers have been licensed by the State, and the number of workers studied in the analysis was 2,643, found in 14 different occupations of that industry.

As to housing conditions, it appeared that of the 2,379 houses in which licenses were granted 42 per cent were tenements and 58 per cent were dwellings. The average family group is made up of three to four people, while the prevailing condition is that of one and one-half rooms for one person.

The work is carried on for the most part in the kitchen or dining room. In 24 per cent of all cases reported the work was done in the kitchen. The ventilation and heat of workrooms were reported as being "very good," or "good."

As to nativity, more than one-half of the workers were born in the United States, the ranking foreign nationalities being Italian, Canadian, and Irish.

The largest number of mothers and fathers are 25 to 35 years of age, with almost an equal number 35 to 45 years. A surprisingly large number of workers were over 60 years of age.

In more than three-fourths of the families where home work is done the father is living (78 per cent of the total 2,223 families). Of the entire number of families 81 per cent have no children at work; also of these 41 per cent have no dependent children; 21 per cent only one dependent child and 18 per cent two or more children.

The maximum income from home work is \$5 per week. The hourly rate of earnings for the majority of workers is from 7 to 10 cents. A large majority of those in the lowest income group (under \$520 per annum) supplement their income by taking boarders or lodgers.

As a result of its investigations the board made certain recommendations, among which were: Total prohibition of home work as the ultimate goal, with a present adjustment prohibiting manufacturing and mercantile establishments giving out home work requiring work on children's clothing, dolls, toys, foods, table linen, handkerchiefs, etc.; requirement of manufacturing and mercantile establishments to report monthly a list of employees engaged on home work; and an appropriation of \$10,000 to enforce the present law on home work.

Missouri.—KANSAS CITY.—*Board of Public Welfare. Sixth annual report, April 21, 1914–April 20, 1915. Kansas City, Mo. [1916.] 206 pp.*

The board of public welfare of Kansas City is a body which combines under one head the interests of the community expressed in such activities as those of factory inspection and research, recreation, charity, free legal aid, welfare of the homeless, the unemployed and the delinquent, and social service of various kinds. The cost during the year to maintain the board was \$147,058, an amount evidently insufficient, as considerable retrenchment in expenses and in the scope of the work was found necessary.

During the year the research bureau of the board made an investigation of the cost of housing working people in Kansas City and of the extent of child labor. This bureau also compiled a new directory of the charities of the city.

The survey of working children included 1,000 who were under 16 years of age, together with all colored children graduated in 1914 from the grade schools. The purpose of the survey was to ascertain the age at which children leave school, why they leave, in what occupations they are found, their success therein, and in what way the community either through its schools or other means can serve their interests. Data concerning 900 boys under 16 years of age show that the largest number, 317, or 35.2 per cent, were newsboys; the next largest number, 133, or 14.8 per cent, were in shops and stores; the third largest number, 108, or 12 per cent, were in department stores; while 101, or 11.2 per cent, were doing office and errand work.

Although the survey is said to have been so limited as to preclude the drawing of any definite conclusions, certain fundamental facts were, however, disclosed by the investigation. The principal reasons for withdrawal from school were found to be economic pressure, dissatisfaction, and the idea that further schooling was unnecessary. Positions are secured in a careless, haphazard fashion; there is much shifting around from job to job; "blind-alley jobs" are frequently taken up; and much of the work that is entered upon is demoralizing; while no regard is given to proper vocational training.

It is recommended as a result of the investigation that there be a complete and continuous system of registering children of school age; that there be organized a department of vocational guidance; the establishment of closer relation between the work of the attendance office, the night school and children at work; registration of child labor permits issued to the employer and their reissuance with each change in position, as well as the use of special vacation permits and increasing the age limit for night work in messenger service from 16 to 21 years.

The legal aid bureau handled 6,262 cases during the year, of which 2,494 were claims for wages, varying in amounts from 25 cents to \$50. There was collected by the bureau \$7,705.

The free employment bureau filled 2,834 permanent positions and 24,810 temporary jobs.

New York.—*Insurance Department.*—*Proceedings of the joint conference on workmen's compensation insurance rates, 1915.* Albany, 1915. 39 pp.

This report will be found summarized in this number of the REVIEW on p. 66.

——— **NEW YORK CITY.**—*Bureau of Municipal Investigation and Statistics (Department of Finance).* *Report relative to proposed legislation providing pensions to widows with children.* January 25, 1915. [New York, 1915.] 26 pp.

——— *Municipal Lodging Houses.* *Advisory Social Service Committee.* *The men we lodge: A report to the commissioner of public charities, city of New York, by the advisory social service committee of the municipal lodging houses.* September, 1915. [New York, 1915.] 42 pp.

This is a study into the character, conditions and causes of dependency of 1,500 homeless men who applied for shelter in the municipal lodging houses of New York City during March, 1914. The result of the investigation shows that a substantial proportion of the men who applied at the municipal lodging houses are unemployable. Of 2,000 men who were given medical examination 1,774 were declared physically able to work in the judgment of the examining physicians, and 226, or 11 per cent, were declared unable to work. Physical disability, retarded mentality, inebriety, habitual idleness, lack of training, and old age were some of the factors which contributed to the inefficiency of these men.

This report was also printed in the American Labor Legislation Review, New York City, for November, 1915 (Vol. 5, No. 3, Publication No. 30).

Ohio.—*Industrial Commission.*—*Rates of wages, hours of labor, and fluctuation of employment in Ohio in 1914.* Columbus, 1915. 317 pp. (*Bulletin of the Industrial Commission of Ohio*, vol. 2, No. 4; department of investigation and statistics, Report No. 16).

A statement concerning this investigation will be found on page 30 et seq. of this number of the REVIEW.

——— *Union scale of wages and hours of labor in Ohio on May 15, 1915.* Columbus, 1916. 107 pp. (*Bulletin of the Industrial Commission of Ohio*, vol. 2, No. 8; department of investigation and statistics, report No. 20.)

This report shows the union scale of wages and hours of labor on May 15, 1915, in occupations in which a considerable number of the employees are organized in most cities. It includes data from 14 cities in Ohio having a population in 1910 of 25,000 or more. The information is classified by trades and by localities.

Advance in rate of wages was secured during the twelve-month period ending May 15, 1915, by about 18,000, or 24 per cent, of the 75,000 trade unionists covered in the report. These advances ranged generally from 50 cents to \$4 per week. One-sixth of the workers benefiting by these advances secured them through strikes, while the remaining five-sixths gained them through conferences, agreements, or other methods.

Pennsylvania.—*Department of Labor and Industry.* *Rules and rulings of the Pennsylvania workmen's compensation board issued by the workmen's compensation bureau of the department of labor and industry.* Harrisburg, 1916. (*Bulletin No. 2.*)

This bulletin contains rules and instructions for the execution of compensation agreements, rules of procedure, rulings of the board, and a list of forms as adopted by the compensation bureau in its administration of the State workmen's compensation act.

——— *Department of Mines.* *Report, 1914.* Harrisburg, 1915. 2 vols.

Part I covers in detail the operations in the 21 anthracite districts, and Part II operations in the 28 bituminous districts, as returned by the inspectors. Observations and suggestions are offered relating to mine subjects, with special reference to improved physical and sociological conditions, first-aid and rescue work, relief funds, needed legislation, and accident prevention. The important facts are summarized in the introduction:

The coal production of Pennsylvania for the year 1914 was 237,074,171 net tons, of which 91,189,641 tons were anthracite and 145,884,530 tons bituminous. The coke production was 17,164,124 net tons. Both coal and coke showed a reduction from the high record of 1913. The decrease in the anthracite output was 437,323 tons; in the bituminous, 27,081,129 tons; and in the coke, 7,554,114 tons.

There was a notable decrease in the number of accidents in both regions. The anthracite fatalities numbered 600, as against 624 in 1913; the bituminous numbered 413, as against 611. The nonfatal accidents in the anthracite region numbered 1,014, as against 1,125 in 1913, and in the bituminous region 963, as against 1,082. Notwithstanding the reduced tonnage, the number of employees was considerably greater than in 1913, the reduction in tonnage being due to a reduction in the number of days worked. The anthracite region reported 180,899 employees, as against 175,310 in 1913; the bituminous reported 196,038, as against 189,909.

South Carolina.—*Department of Agriculture, Commerce, and Industries.* *Labor Division.* *Seventh annual report.* Columbia, 1916. 144, [1] pp.

A detailed report of the work of the division for the year 1915, with a discussion of the social and economic conditions obtaining in the State, and recommendations for legislative enactments; also statistical tables and industrial directory.

The average number of employees in South Carolina industries was 76,452, of whom 57,933 were males and 18,519 females. In these figures are included 4,660 male and 3,280 female workers under 16 years of age.

In 1909 there were 726 children under 12 years of age employed in the textile industries, but no such employees have been so engaged for the four past years. There were 28 prosecutions for violation of the child labor law, and 48 orders for dismissal of children under age, and an investigation of alleged violation of the 60-hour a week law was conducted.

The following legislative recommendations are made: An intelligible and enforceable 60-hour-a-week law; prohibition of the employment of children under 14 years of age; prohibition of the use of the suction shuttle in textile plants; establishment of a board of arbitration and conciliation; prohibiting professional performances of any child under 14 years of age in theaters, etc.; enlarging the scope of the messenger boy act; requiring fire escapes and other means of safety in case of fire, guarding of dangerous machinery, workshop ventilation and sanitation; bakery inspection; supervision of employment agencies; accident reports; creation of a commission to investigate problems of workmen's compensation and accident insurance. The State factory inspectors recommend the passage of a compulsory education law.

United States.—*Bureau of Naturalization (Department of Labor).* *An outline course in citizenship to be used in the public schools for the instruction of the foreign and native born candidate for adult-citizenship responsibilities.* Washington, 1916. 28 pp.

The introductory statement notes that this is a preliminary and imperfect outline, and merely meant to be suggestive; it was prepared in response to demands upon the Bureau to prepare such a course. Emphasis is laid on the desirability of having all instruction in the English language. Besides courses in civics, courses in domestic science are urged, including such matters as the care of children and infants.

——— *Children's Bureau (Department of Labor).* *Child-labor legislation in the United States.* Washington, 1915. 1131 pp. and one folder. (Bureau publication No. 10.)

A compilation of all child-labor legislation in force in the various States and outlying possessions of the United States, as of October 1, 1915. Part 1 consists of 7 analytical tables of certain important provisions regulating the employment of children, compulsory school attendance, etc.

Part 2 consists of a reproduction of all such laws as are noted in the tables, and such as were not general in type or not of primary importance, and therefore were not included in the tabular statements presented.

——— *Bureau of Immigration (Department of Labor).* *Immigration laws. Rules of November 15, 1911. Edition of February 12, 1916, with amendments to rules 6, 12, 19, 22, and 28.* Washington, 1916. 71 pp.

FOREIGN COUNTRIES.

Canada.—*Board of Inquiry into the Cost of Living.* *Report of the Board.* Ottawa, 1915. 2 volumes.

——— *Department of Labor (statistical branch).* *The rise in prices and the cost of living in Canada, 1900–1914. A statistical examination of economic causes. Synopsis of exhibit by the statistical branch of the Department of Labor. Laid before the board of inquiry into the cost of living, 1915.* Ottawa, 1915. 83 pp.

A summary of this report will be found elsewhere in this issue of the REVIEW. (See p. 51.)

Denmark.—*Statens Statistiske Department.* *Statistisk aarbog 1915, 20de aargang.* Copenhagen, 1915. xxiv, 230, [5] pp.

This volume constitutes the twentieth issue of the statistical yearbook for Denmark, containing a classified table of contents both in the vernacular and in French, divided into eleven sections. It carries a detailed subject index. The data are brought to the end of the calendar year 1914, or up to the fiscal year ended March 31, 1915. The volume contains tables of retail and wholesale prices—index numbers for the latter—sickness insurance statistics, statistics of mutual benefit societies, unemployment

insurance, accident insurance, old-age pensions, strikes and lockouts, wages, hours of labor, immigration, trade unions, cooperation, etc., etc.

Germany.—*Allgemeiner Knappschaftsverein zu Bochum. Verwaltungsbericht für das Jahr 1914. Bochum, 1915. 2 vols.*

These two volumes contain a report of the general miners' fund in Bochum for the year 1914, one of the administrative bodies through which the workmen's insurance law applicable to miners is enforced. There is noted a decrease in the membership and receipts and an increase in expenditures with consequent reduction of the annual surplus, explained by the report as a result of the war.

The average membership in 1914 was 388,385 in the sick fund, 313,672 in the pension and aid fund, and 375,485 in the invalidity and survivors' fund. The combined assets of the 3 departments amounted to 298,052,533.74 marks (\$70,936,503 51).

The report contains detailed data as to the general condition of the health of the members and as to certain diseases.

— *Statistisches Amt. Die Krankenversicherung im Jahre 1913. Berlin, 1915. 17, 60 pp. (Statistik des Deutschen Reichs, Band 277.)*

This is the twentieth annual report on the activities of the German sick funds and relates to the year 1913. Medical care is provided from the first day of sickness; pecuniary aid is given beginning with the fourth day of sickness. Compensation continues for 26 weeks at the most. From this report and previous ones for the years 1911 and 1912 the following table was prepared by the Reichs-Arbeitsblatt:

RESULTS OF THE OPERATION OF GERMAN INDUSTRIAL SICK FUNDS, 1911 TO 1913.

[Source: Reichs-Arbeitsblatt, vol. 13, No. 3, pp. 233 ff. Berlin, 1915.]

	Total, all funds.			Per member.		
	1911	1912	1913	1911	1912	1913
Number of funds	23,109	21,000	21,592			
Average membership	13,610,048	13,217,705	13,586,473			
Average membership per fund	589.34	610.26	635.67			
Cases of sickness of members involving disability	5,772,388	5,633,956	5,710,251	0.42	0.43	0.42
Days of sickness involving payment of pecuniary benefits or hospital treatment	115,128,905	112,249,064	117,436,644	8.45	8.49	8.66
Ordinary receipts (interest, entrance fees, contributions, subsidies, and miscellaneous receipts, exclusive of receipts for invalidity insurance)	\$98,125,165	\$99,390,723	\$104,909,309	\$7.20	\$7.52	\$7.73
Contributions and entrance fees	92,449,306	93,679,394	96,585,587	6.79	7.09	7.27
Ordinary disbursements (costs of sickness, refund of contribution and entrance fees, costs of administration, exclusive of those for invalidity insurance, miscellaneous disbursements)	93,420,889	94,018,781	103,000,076	6.86	7.11	7.59
Costs of sickness	85,077,474	85,617,576	92,983,399	6.25	6.48	6.85
Medical treatment	19,933,505	20,380,724	22,358,051	1.46	1.54	1.65
Medicines and other curatives	12,654,754	13,020,038	14,355,602	.93	.99	1.06
Pecuniary sick benefits	36,552,748	35,794,829	38,446,843	2.68	2.71	2.83
Maternity benefits	1,618,199	1,715,038	1,803,748	.12	.13	.13
Death (funeral) benefits	2,029,064	1,888,035	1,911,602	.15	.14	.14
Hospital treatment	12,223,171	12,745,733	14,026,202	.90	.96	1.03
Care of convalescents	66,036	73,179	81,352	.005	.005	.007
Costs of administration (exclusive of those for invalidity insurance)	5,281,065	5,140,414	6,157,354	.39	.39	.45
Excess of assets over liabilities	74,036,997	73,123,115	73,986,569	5.47	5.53	5.45

— *Streiks und Aussperrungen im Jahre, 1914. Berlin, 1915. 23, 43 pp. Statistik des Deutschen Reichs, Band 279.*

This volume constitutes the sixteenth annual report on labor disputes by the Imperial Statistical Office. The report states that after the outbreak of the war all pending labor disputes quickly terminated, while during the war strikes occurred only to a negligible extent. Thus of all strikes reported during the year, 88.6 per cent fell into the period before the war, an additional 9.4 per cent were terminated soon after the outbreak of the war, while only 2 per cent began and terminated after the outbreak of the war. This 2 per cent of the number of strikes, however, included only

1.2 per cent of the total number of strikers involved. No lockout was reported in 1914 during the war months. The following table shows the distribution by industries of persons involved in strikes and lockouts during the 5-year periods, 1904-1908, 1909-1913, and 1914:

DISTRIBUTION, BY INDUSTRIES, OF PERSONS INVOLVED IN STRIKES AND LOCK-OUTS IN GERMANY, 1904-1908, 1909-1913, AND 1914.

Industry groups.	Number of industrial workers on June 12, 1907 (Industrial Census).	Annual average of striking and locked-out workers—				Striking and locked-out workers—	
		1904-1908		1909-1913		1914	
		Number.	Per cent of industrial workers.	Number.	Per cent of industrial workers.	Number.	Per cent of industrial workers.
Gardening, stock raising, and fishing.....	81,105	633	0.8	505	0.7	325	0.4
Mining, etc.....	817,504	58,109	7.1	69,332	8.5	2,292	.3
Stones and earths.....	694,546	10,758	1.5	12,396	1.8	10,571	1.5
Metal working, machinery, etc..	1,641,835	52,343	3.2	86,325	5.3	15,656	1.0
Chemical industry.....	134,138	1,818	1.4	2,640	2.0	428	.3
Forest by-products, etc.....	71,014	502	.7	833	1.2	103	.1
Textiles.....	857,855	23,061	2.7	19,465	2.3	25,566	3.0
Paper.....	193,065	2,886	1.5	2,488	1.3	968	.5
Leather, etc.....	141,695	4,160	2.9	2,577	1.8	1,093	.8
Woodworking.....	526,478	18,276	3.5	13,397	2.5	4,995	.9
Food products.....	766,229	7,405	1.0	9,111	1.2	1,793	.2
Clothing and cleaning.....	648,841	15,190	2.3	16,946	2.6	2,936	.5
Building trades.....	1,273,150	69,933	5.5	77,668	6.1	18,577	1.5
Printing, engraving, etc.....	167,796	1,848	1.1	1,931	1.2	95	.1
Commerce.....	731,703	6,536	.9	3,487	.5	1,512	.2
Transportation.....	274,190	6,131	2.2	7,992	2.9	7,991	2.9
Hotels, saloons, restaurants, etc.	294,611	81	.0	284	.1	163	.1
Public performances, and not specified industries.....	40,974	147	.4	126	.3	76	.2
Total.....	9,356,729	279,817	3.0	327,593	3.5	95,140	1.0

A total of 1,115 strikes were reported during 1914, involving 5,213 establishments employing 193,414 workers, of whom 58,682 went on strike. The largest number of strikes, 381, affecting 14,919 strikers, lasted for a period of from 1 to 5 days.

As in former years, wage disputes were the most frequent cause for strikes; 884 strikes with 48,029 strikers related to wages, while 230 strikes with 15,266 strikers related to the hours of labor, and 594 strikes with 36,355 strikers involved other demands. As to the results obtained 17 per cent of the strikes were wholly successful and 38.1 per cent were partially successful for the strikers, while 38.5 per cent were terminated without result for them.

The number of lockouts reported during 1914 was 108. They involved 833 establishments and 36,458 workers. The most important lockouts involving 446 establishments and 23,823 workmen took place in the textile industry in the Lusatia district. Considered from the viewpoint of the employers 43.5 per cent of the lockouts were terminated with full success, 50.9 per cent were compromised, and 5.6 per cent ended without result.

Germany.—*Statistisches Amt. Die Volkszählung im Deutschen Reiche am 1. Dezember 1910. Erster Teil: Einleitung und Darstellung der hauptsächlichen Ergebnisse. Berlin, 1915. vii, 155 pp. (Statistik des Deutschen Reichs, vol. 240, part 1.)*

This quarto volume constitutes a summary of the German census of population of December 1, 1910, ascertaining the usual information gathered by census inquiries regarding the sex, age, conjugal condition, occupation, religion, citizenship, etc., of the population. A census of dwellings was also undertaken in connection with it. The Federal law of February 10, 1910, left the direction and responsibility for the taking of the census to the individual communes.

According to this census the population of Germany was 64,925,993 on December 1, 1910, or an increase of 7.07 per cent since December 1, 1905. The absolute increase of 4,284,504 was the largest ever recorded in any five-year period since 1871, the year of the foundation of the German Empire. The relative increase, however, was exceeded in both 1900 (7.82 per cent) and in 1905 (7.58 per cent). Of the increase during the five-year period, the excess of immigration over emigration accounted for 159,904. The annual increase in population during the period 1905 to 1910 was 1.36 per cent. The annual increase in population in the United States for the 10-year period, 1900-1910, was 1.93 per cent. The density of population was 310.9 persons per square mile, as compared with 157 per square mile in 1840, or nearly doubled that of the latter date.

The exodus of the rural population to urban centers has continued in Germany during the last five years according to this census. Thus in 1905, 43 per cent of the population lived in rural communes of less than 2,000 population, while in 1910 this proportion had decreased to 40 per cent. Of the urban increase the larger proportion of it went to cities having a population of 100,000 and over, as the proportion of those living in cities ranging from 2,000 to 100,000 was practically the same at both the censuses of 1905 and 1910, while for the former class of cities the proportion in 1905 was 19 per cent, and in 1910 it was 21 per cent.

Germany.—*Zentral Verein für Arbeitsnachweis zu Berlin. Geschäftsbericht für das Jahr 1914-15. Berlin, 1915. 34 pp.*

During the year ending March 31, 1915, the Berlin central employment exchange, semipublic and State subsidized, through its own central office and its nine sub-departments registered 480,812 applications for work. It was notified of 355,031 vacant situations and succeeded in filling 292,971 vacancies. These figures indicate an average of 135 applicants for each 100 vacancies, and that situations were secured for 60.9 per cent of the applicants registered. The number of applicants for each 100 vacancies was the largest in August, 1914—i. e., 270—and lowest in March, 1915—i. e., 86. Since the outbreak of the war up to March 31, 1915, the exchange placed 40,762 applicants for work with the army as trench diggers. In order to meet the large amount of unemployment among female workers, the exchange, in August, 1914, opened workshops for the manufacture of war supplies, so that at the end of September about 3,000 were employed in the manufacture of cartridge belts, bags for hard-tack and bread, helmet covers, etc. The report comments in terms of praise upon the successful work of the exchange as compared with the inefficient work done during the war by the employment exchanges organized by employers.

——— **MUNICH.**—*Schulrat. Achter Jahresbericht der männlichen Fortbildungs- und Gewerbeschulen Münchens für das Schuljahr 1913-14. Erstattet von Schulrat Dr. G. Kerschesteiner. Munich, 1914. 446 pp.*

This is the eighth annual report on improvement and trade schools for boys in Munich, containing general statistics for the entire system of these schools and detailed data as to attendance, curriculum, teaching staff, etc., for each individual school.

——— **PRUSSIA.**—*Statistisches Landesamt. Statistisches Jahrbuch für den preussischen Staat, 1913, vol. 11. Berlin, 1914. xlii, 693 pp.*

In the present eleventh issue of the yearbook for Prussia the Prussian State Statistical Office presents in 21 sections and an appendix statistical data on practically the same topics as in former issues. Section six is exclusively devoted to labor conditions and gives data on employment offices, wages, hours of labor, strikes and lockouts, and establishments and employees working under collective agreements. Other sections contain statistical material on cooperative societies, hours of labor

and rest periods of railroad employees, retail prices of foodstuffs, workmen's insurance, housing of workmen, and workmen's colonies. The volume is provided with a detailed index giving the sources of all data.

Germany.—**SAXONY.**—*Statistisches Landesamt. Statistisches Jahrbuch für das Königreich Sachsen. vol. 42, 1914/15. Dresden, 1915. 362 pp.*

This is the forty-second issue of the yearbook published by the State Statistical Office of Saxony and presents the usual information contained in such publications. The material is grouped in 21 sections and indexed alphabetically. It contains statistical data relating to daily hours of labor and rest periods; employment bureaus; unemployment; strikes and lockouts; collective agreements; current wages by localities; wages of miners; wages and labor conditions in the State railroad service; wages in several cities; and wages of workmen insured in trade accident associations; number of industrial establishments employing more than ten workmen and number of the workmen employed, by industries; retail prices of foodstuffs in selected cities; and statistics of cooperative societies.

Great Britain.—**Board of Trade.** *Vehicle making and miscellaneous metal trades. Prepared on behalf of the Board of Trade for the use of advisory committees for juvenile employment in Greater London. London, 1915. 43 pp. (Handbooks on London trades.)*

This handbook is one of a series prepared for the use of vocational guidance committees in their work of advising boys and girls as to the choice of suitable employment. This particular pamphlet gives brief descriptions of the different occupations which enter into wagon manufacture and in different metal trades. It describes conditions of work, hours and wages, generally prevailing, and notes opportunities for entrance in the various occupations so far as those matters concern young workers.

——— *Railway accidents. Summary of accidents and casualties reported to the board of trade by the several railway companies in the United Kingdom during the three months ending 31 March, 1915, together with reports to the Board of Trade by the inspecting officers [etc.] upon certain accidents which were inquired into. London, 1915. 143 pp.*

Contains text statements concerning special investigations made of railway accidents by officers of the board of trade during the first quarter of 1915.

——— *Chief Registrar of Friendly Societies. Reports of the chief registrar of friendly societies for the year ending December 31, 1914. Part A: General report. London, 1915. 250 pp.*

This report is based upon returns from friendly, collecting, cooperative, and building societies, and trade unions, and other similar organizations. The general report shows the membership, income, expenses for benefits and management, and balances for the year 1914, by classes of societies, while the summary tables cover the operations for the year 1913. A study of the origin, growth, and development of friendly societies may be found in the twenty-fourth annual report of this bureau, 1909, volume 2, page 1550 et seq.

——— *Departmental Committee on Land Settlement for Sailors and Soldiers. Introduction and Part I of the final report of the departmental committee appointed by the president of the Board of Agriculture and Fisheries. London, 1916. 30 pp. fold. chart.*

A statement concerning this report may be found on pages 11 to 13 of this number of the REVIEW.

——— *Home Department. Mines and quarries; general report, with statistics, for 1914. London, 1915. 2 vols: Part II, Labor; Part III, Output.*

This report appears regularly in three parts. The general summary, or part one, was listed and a brief abstract made in the December, 1915, issue of the REVIEW.

Great Britain.—*Local Government Board. Maternal mortality in connection with child bearing and its relation to infant mortality. London, 140 pp. (Its forty-fourth annual report, 1914-15; Supplement in continuation of the report of the medical officer of the board for 1914-15.)*

——— *Manual of emergency legislation comprising all the acts of Parliament, proclamations, orders, etc., passed and made in consequence of the war. London, 1914, 1915. 5 vols.*

This single volume and four supplements, all told some 2,000 pages, comprise British emergency legislation during substantially the first year of the war or to August 31, 1915.

——— *Post Office. Standing Committee on Boy Labor. Fifth annual report. London, 1915. 22 pp.*

The standing committee on boy labor in the post office of Great Britain was appointed to investigate and make recommendations concerning the employment of boys between the ages of 14 and 16 in the post office department, with a view to making their employment profitable to them upon their discharge, preparing them for work outside of the office, and giving advice regarding their physical training, education, etc. It made its first report November 21, 1910.

——— *Royal Commission on the Civil Service. Sixth report of the commissioner; minutes of evidence, February 11 to July 8, 1915, with appendices. London, 1915. 2 vols.*

The civil-service commission was appointed in 1912 to investigate the methods of making application and promotions in the civil service, the diplomatic and consular services and the legal department, and to investigate in general the system of competitive examination for civil-service appointment, with a view to making recommendations for any alterations or improvements which might be advisable.

The commission presented 5 reports and went out of existence. A new appointment was made January, 1915, and the above report, called the sixth report of the commission, was issued regarding conditions of appointment and promotion of employees in the judicial department of Great Britain. As the legal department of England and Scotland differ materially, this report was divided in two parts, one devoted to the system of each country.

——— **BLACKBURN.**—*Public Health Department. Annual report upon the health of Blackburn for the year 1914. Blackburn, 1915. xv, 186 pp. and statistical folders.*

Contains matter relating to the health and sanitary conditions of the borough of Blackburn, year ending December 31, 1914; also vital and mortality statistics, some material relating to the inspection of factories and workshops and the operations of the house and town planning act of 1909. Death rates among persons engaged in the cotton industry of the city are given for 1914 and average rates for the period 1889 to 1914, by causes; operatives are classified into four occupational groups—weavers, spinners, winders and warpers, and card-room hands.

India (Madras).—*Judicial Department. Factories report, 1914. Madras, 1915. 18 pp.*

Italy.—*Ministero di Agricoltura, Industria e Commercio. Direzione Generale del Credito e della Previdenza. Atti del consiglio della previdenza e della assicurazione sociali. Sessione del 1915. Rome, 1915. 550 pp. (Annali del credito e della previdenza. Series II, No. 15).*

The minutes of the meeting of the council of savings and social insurance (Apr. 12-16, 1915). The meeting discussed questions relating to mutual aid societies, life insurance, insurance institutes for the employees of common carriers and questions of social insurance in general.

Italy.—*Ispettorato Generale del Commercio. Indici economici, 1903-1914; 1914. Rome, 1915. 2 vols.*

These two volumes form an addition to the statistical literature of so-called business barometrics, and have been gathered by the Italian Inspectorate General of Commerce from various official sources. These data will be continued in the future in a regular monthly publication. There are presented such data as the discount rate of Italian banks of issue, holdings of commercial paper by banks of issue, and private financial institutions; gold and silver in banks of issue, rates of foreign exchange, Italian Government bond quotations, public revenues, clearing-house transactions, taxes on business, stamp taxes, movement of railroad traffic, imports and exports and trade balance, imports and exports of certain articles, stock quotations, deposits in postal savings banks, relative prices of foodstuffs and grains, immigration, and strikes and lockouts.

————— *Provvedimenti in materia di economia e di finanza in seguito alla guerra Europea. Part I: August 1, 1914, to July 31, 1915. Rome, 1915. 620 pp. (Annali del credito e della previdenza, Series II, vol. 10.)*

The first volume of a collection of economic and financial measures enacted in Italy during the European war. The volume covers the period August 1, 1914, to July 31, 1915, and reproduces laws, decrees, ministerial circular orders, orders of the military authorities, and policy forms and premium tariffs adopted by the National Insurance Institute and the National Accident Insurance Fund for War Risks.

————— *Provvedimenti in materia di economia e di finanza emanati in Austria in seguito alla guerra Europea. Part I. August 1, 1914, to March 31, 1915. Rome, 1915. (Annali del credito e della previdenza, Series II, vol. 13.) 386 pp.*

A reproduction of war measures of an economic and financial character enacted in Austria between August 1, 1914, and March 31, 1915.

Netherlands.—*Centraal Bureau voor de Statistiek. Werkstakingen en uitsluitingen in Nederland gedurende, 1913. The Hague, 1915. lii, 207 pp. (Bijdragen tot de Statistiek van Nederland, new series, No. 216.)*

This volume reports 400 strikes in the Netherlands during 1913, of which number 383 involved 23,990 strikers and 1,878 establishments. Of the total reported 362 were for an increase in wages, 24 against a decrease in wages, 89 due to other wage questions, 84 due to demands as to hours of labor, 14 caused by a demand for unionism, 38 for reinstatement of discharged employees, 7 in relation to shop rules, 39 involving questions of the contract of hire, and 101 for other demands not known. The strikers succeeded in 91 instances, were partially successful in 159, failed in 116, and concerning 27 disputes the result was unknown or doubtful. More than one-half, or 228 strikes, lasted less than one week.

During the year 1913, 27 lockouts were reported affecting 404 establishments and 6,171 employees. Of these one failed, 18 were partially successful, 6 were wholly successful, and for 2 no report is made.

————— *Departement van Landbouw, Nijverheid en Handel. Overzicht van de verslagen der kamers van arbeid over 1914. The Hague, 1915. lxi, 59, ii pp.*

A report of the operations of the labor councils in the Netherlands in 1914. These councils are equipartisan bodies composed of representatives elected by employers and by employees, serving either for a trade or for a locality. They have considerable authority in all questions as to labor conditions, hours, wages, etc.; they also act as conciliators and arbitrators in labor disputes and in interpreting disputed points in labor agreements. Their advice and influence are particularly noteworthy in government work, both State and municipal. Of 85 organized councils at the close of 1914, 3 made no report.

Netherlands.—*Directie van den Arbeid. De Handvlasserij in Friesland. Uitgegeven voor rekening van het Departement van Landbouw, Nijverheid en Handel. The Hague, 1915. 37 pp.*

This volume contains the report of an investigation of the flax spinning industry in the Province of Friesland in the Netherlands made during the winter of 1913-14 by the inspectors of the labor office. The inquiry covered 2,341 work places in which 3,587 persons were employed. The small number of persons employed in proportion to the number of work places shows quite clearly that the industry is predominately a hand-working one. The fact that 24 per cent worked on their own account is also a partial indication of its being a handicraft primarily, while it also appeared that in the case of 1,174 establishments 506 were reported as employing only one workman each. It is likewise a highly seasonal industry, as indicated by the fact that out of a total of 2,273 from whom returns were received, 439, the largest proportion, or 19.3 per cent, worked only 10 weeks out of the year, while only 57, or 2.5 per cent, worked 20 weeks and over.

In former times the preparation and spinning of flax was entirely a hand operation, but in recent years it is noted that small machines are being introduced to a considerable extent.

——— *Verslag over het haventoezicht uitgeoeffend in 1914. [The Hague] 1915. xii, 84 pp. (Publication No. 17.)*

This is the fifth special report issued by the Dutch labor department on conditions in dock labor at the principal coast harbors in Holland. The first report was one made as of January 1, 1910, and subsequent reports have appeared annually for the years 1910 to 1913. The volume here listed notes conditions prevailing in 1914. The inspections and investigations are made by district labor inspectors. The reports relate mainly to Rotterdam and Dordrecht, Amsterdam, Zaandam, Velsen, and Westzaan, and includes such matters as hours, wages, accidents, and living conditions. A brief survey is also included for several smaller harbors treated separately. The 1914 report presents a special chapter also concerning conditions in dock labor resulting from the war. No general summary is presented.

A special law, it is noted, was enacted October 16, 1914, for the protection of stevedores and other dock laborers.

New South Wales.—*Department of Labor and Industry. Report on the workings of the factories and shops act, 1912, during the year 1914. Sydney, 1915. 59 pp.*

The average number of persons employed in the factories of New South Wales in 1914 was reported as 90,141, as compared with 95,584 in 1913. The number of factories was 5,993 in 1914 as compared with 5,561 in 1913. Of the number of employees reported for 1914, 70 per cent were males and 30 per cent females. There were 2,128 males under 16 years of age and 2,480 females.

There were reported 442 accidents during the year, of which 9 were fatal.

During 1914, 177 informations were laid for violation of the act, out of which 168 convictions were had. The number of informations laid in 1913 was 90 and the number of prosecutions 89.

——— *Government Statistician. The official yearbook of New South Wales, 1914. Sydney, 1915. 1,010 pp.*

An historical and statistical descriptive manual of New South Wales.

New Zealand.—*National Provident Fund. Fourth annual report of the board for the year ended December 31, 1914. Wellington, 1915. 2 pp.*

The National Provident Fund of New Zealand was established by law in 1910 and came into operation on March 1, 1911. It is a government insurance scheme whose purpose is to provide for annuities in old age, supplemented, however, by maternity

and sickness benefits. The system is open to any persons between the ages of 16 and 45 years residing in New Zealand and whose average income during three years prior to joining has not exceeded approximately \$1,000 a year.

Norway.—*Riksforsikringsanstalten. Fiskerforsikringen for Aar 1914. Christiania, 1915. (Norges officielle statistik. VI, 54.) 16*, 43 pp.*

This is a report of the operation of the law of August 8, 1908, and amendment of August 18, 1911, establishing accident insurance in Norway for fishermen and sealers. From 1909 to 1914 there had been paid in premiums 810,120.70 crowns (\$217,112.35), while the amount of compensation paid for the period was 978,171.37 crowns (\$262,149.93). The difference between the premiums and compensation is paid by the State harbor fund.

ACCIDENTS REPORTED AND COMPENSATED AND RATE PER 10,000 PERSONS INSURED, FISHERMEN'S ACCIDENT INSURANCE DEPARTMENT, NORWAY, 1909 TO 1914.

Year.	Number insured.	Accidents reported.				Compensated accidents resulting in—			
		Compensated.	Not compensated.	Total.	Rate per 10,000.	Death.		Disability.	
						Num-ber.	Rate per 10,000.	Num-ber.	Rate per 10,000.
1909.....	91,240	422	116	538	59.0	186	20.4	236	25.9
1910.....	89,925	342	122	464	51.6	199	22.1	143	15.9
1911.....	87,832	291	92	383	43.6	163	18.6	128	14.6
1912.....	89,911	271	104	375	41.7	137	15.2	134	14.9
1913.....	89,197	297	91	388	43.5	187	21.0	110	12.3
1914.....	87,614	270	122	392	44.7	151	17.2	119	13.6
Total.....	535,719	1,893	647	2,540	47.4	1,023	19.1	870	16.2

For further information concerning accidents in Norway fisheries, reference is made to Bulletin No. 157 of this Bureau, pp. 139-141.

— *Riksforsikringsanstalten. Industristatistik for Aaret 1913. Christiania, 1915. 39, 90 pp. (Norges officielle statistik, VI, 53.)*

This volume consists of a report issued by the Royal Workmen's Insurance Institute. The report of the office is limited in the sense that the law of July 23, 1894, and amendments thereto, June 9, 1911, authorizes supervision only of insured industrial establishments. It is the purpose of the present report to show the industrial development in Norway from 1897 to 1913, with particular reference to conditions prevailing in 1913. Detail statistical tables are prepared showing the number of insured establishments, average number of insured employees, days of work, wages, etc., by industries and occupations, and by Provinces.

Queensland.—*Department of Labor. Report of the director of labor and chief inspector of factories and shops. Year ending June 30, 1915. Brisbane, 1915. 139 pp.*

Statistical report of the government labor exchange and the work of the department in the inspection of factories and workshops.

— *Registrar of Friendly Societies. Thirtieth report of the Registrar of friendly societies, building societies, and trade unions. Brisbane, 1915. 38 pp.*

Friendly societies may be briefly described as a mutual aid or benefit systems organized as a rule by persons of moderate means. They are essentially mutual insurance societies supported by contributions from their members. They are recognized and favored by law but must submit to a degree of administrative supervision of their finances and operations by the State authorities.

The report here listed relates to the operation of friendly societies, building societies, and trade-unions in Queensland in the year 1914, although data as to registrations is complete up to September 30, 1915. The membership of friendly societies on December 31, 1914, was 52,247, as compared with 32,164 in 1905. There was paid out in benefits in 1914 to members and their dependents £112,020 (\$545,145) in 1914, as compared with £77,733 (\$378,288) in 1905. The administrative expenses for the years indicated was £28,076 (\$136,631.85) and £73,359 (\$357,002), respectively.

That part of this report relating to building associations shows 16 such societies in existence at the end of 1914.

The number of trade-unions was 36 and employers' association 7. The expenditures of the trades-unions in 1914 were as follows: Strike pay £549 (\$2,672); sickness, £1,143 (\$5,562); superannuation, £438 (\$2,131); funeral benefits, £346 (\$1,684); unemployment relief, £606 (\$2,949); other benevolent grants, £61 (\$297), a total of £3,143 (\$15,295) for benefits. Expenses of management made up £8,797 (\$42,811), or 56.5 per cent of the total £15,576 (\$75,801). The remainder £3,636 (\$17,695) consisted of certain miscellaneous items of expenditure.

Scotland.—*Government Committee on War Organization in the Distributing Trades in Scotland. First report. Edinburgh, 1915. 11 pp.*

The committee was appointed to determine how far it would be practicable to readjust conditions of employment in the selling trades in Scotland so as to release a larger number of men for enlisting or other national service with the minimum of interference with the necessary conduct of the trades. The problem was of some moment when it is known that there were employed in the distributing trades in Scotland, according to the census of 1911, 152,081 persons out of a total population of 4,760,904. Consideration was given by the committee to the matter of substituting women and girls for the employment of men and boys, and it is recommended that in so far as the character and conditions of the work performed by women approximate to that performed by men the pay of the women should approximate that of the men. It was also suggested that a uniform system of shorter hours might be adopted. One very definite recommendation was to the effect that the release of men from the trades for service in the army or navy or munition factories should be accompanied by guarantee of reinstatement for them after the war, if they desire to return to the work and are suitable for it.

South Australia.—*Statistical Department. Statistical register of the State of South Australia for the year 1914. Part III.—Production (section 1. Prefatory report). [Adelaide,] 1915. xxi pp.*

Statistical report of agricultural and industrial production in the State of South Australia, year ending June 30, 1915.

Sweden.—*Pensionsstyrelsen. Årsberättelse, 1914. Stockholm, 1915. 35 pp.*

The general law on old-age pensions, enacted June 30, 1913, became applicable in Sweden January 1, 1914. The report here listed gives the results of operations for the first year of its application. The law provides for pensions to Swedish citizens who have arrived at the age of 67, or have suffered permanent incapacity for work. The law is a contributory measure, although the State supplies a subsidy. The basic contribution of the insured person is 3 crowns per year, together with an additional premium graded according to the income of the insured. Contributions are made by the insured during the period of from 15 to 66 years of age. The annual pension forms 30 per cent of the total amount of the premiums contributed (principal and interest) in the case of men and 24 per cent for women, with a gradual reduction corresponding to the increasing age of those who have completed their twenty-fifth year at the time the law became effective.

The number of insured persons paying premiums in 1914 was 3,225,700, of whom 890,200 lived in cities and 2,335,500 lived in rural districts. The total amount of basic premiums paid in amounted to 8,162,900 crowns (\$2,187,657.20), municipal

contributions proportional to basic contributions of insured persons amounted to 1,514,200 crowns (\$405,805.60), and the amount of premiums paid by insured persons supplementary to basic premiums amounted to 4,893,900 crowns (\$1,311,565.20), a total of 14,571,000 crowns (\$3,905,028.00). During the year 43,495 individuals made claims for pensions, of whom 32.4 were males. The number actually receiving pensions was 33,138, and the amount paid out was 1,875,456.65 crowns (\$502,622.38), or an average of 56.60 crowns (\$15.17) for each pensioner during the year.

Under the voluntary feature of the law which permits persons who so desire to make contributions of at least 30 crowns per year, so as to secure a larger pension than under the compulsory system, 628 persons were registered at the end of the year.

Sweden.—*Socialstyrelsen. Kollektivavtal i Sverige år 1914. Stockholm, 1915. 39 pp. (Sveriges officiella statistik. Socialstatistik.)*

Since 1908 that office of the Swedish Government concerned with the investigation of labor problems and the administration of the labor laws has published annual accounts of collective agreements entered into between employers and employees. The publication here listed presents that information for 1914. During the year 226 agreements were recorded which fixed the conditions of employment between 59,980 workmen and 1,572 employers. As far as data are available, the following table shows the relative extent of the agreements in force on January 1, 1914, and January 1, 1915:

NUMBER AND PER CENT OF INDUSTRIAL EMPLOYEES IN CERTAIN INDUSTRIES IN SWEDEN EMPLOYED UNDER TRADE AGREEMENTS, 1914 AND 1915.

Industry groups.	Total wage earners 1913.	Number and per cent under trade agreements on—			
		Jan. 1, 1914.		Jan. 1, 1915.	
		Number.	Per cent.	Number.	Per cent.
Mining and metal industries.....	119,698	63,522	53.1	63,613	53.1
Earth, stone, and clay industries.....	45,274	21,534	47.6	22,050	48.7
Woodworking.....	62,633	20,513	32.8	18,603	29.7
Paper, printing, and publishing.....	38,288	20,519	53.6	21,367	55.8
Food products.....	45,692	18,330	40.1	19,150	41.9
Textiles and clothing.....	52,479	13,444	25.6	23,260	44.3
Leather, hair, and rubber.....	20,055	10,180	50.8	11,743	58.6
Chemicals.....	14,469	3,208	22.2	5,275	36.5

The total number of agreements in force on January 1, 1915, was 1,408, involving 8,168 employers and 244,390 employees, as compared with 1,448 in force on January 1, 1914, which included 8,300 employers and 233,020 employees within their terms.

Of the 226 agreements which became operative in the course of the year 1914, 117 were concluded by organized employers, and 109 by unorganized employers; 217 by organized workmen and 9 by unorganized workmen. The majority of the agreements, or 148, were concluded between employers of one or more employees; 71 were local in their scope, and 7 were of national extent. These latter, however, involved the largest portion of workmen, i. e., 33,900. The relative number of specified duration has been as follows during those years for which reports have been received:

	Less than one year.	One year but not over two.	Two years but not over three.	Three years but not over four.	Over four years.	Duration not specified.
1908.....	32.3	37.6	22.3	2.6		5.2
1909.....	18.9	43.6	26.3	5.3	4.4	1.5
1910.....	16.1	15.2	10.2	40.2	16.5	1.8
1911.....	9.6	12.8	10.5	4.1	60.3	2.7
1912.....	12.0	9.5	20.3	15.5	41.1	1.6
1913.....	12.2	13.9	47.7	14.3	11.0	.8
1914.....	20.3	13.3	35.0	15.5	13.3	2.6

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INDUSTRIAL ANILIN POISONING IN THE UNITED STATES.¹

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Industrial poisoning from anilin and substances closely allied to it has long been recognized in Germany, where the manufacture of anilin dyes is an enormously important industry, and the possible effect on the workmen of the various substances used or evolved during such manufacture has there been a subject of study since the sixties. More recently the growth of the dye industry in Great Britain has led to reports in that country concerning cases of anilin and of nitrobenzene poisoning.² As we know, there was no attempt in this country to compete with Germany in the manufacture of anilin colors or of anilin itself till the war shut off the supply and forced us to begin to make for ourselves what had heretofore been obtained from Germany. Uncertainty as to the duration of the war and lack of skill in these complicated processes delayed for many months the equipment of American factories, but once started, the movement has gained great impetus, and it is said that there are already more than a dozen factories for the production of anilin from benzene and of anilin dyes, and undoubtedly more will be constructed during the present year.

The sudden introduction of these industries brings new problems before physicians and sanitarians. Making anilin from coal tar involves exposure to poisons that are new to us in America, and because they are unfamiliar it is most improbable that the planners of these factories and the industrial chemists in charge of the processes will have given much thought to the protection of their workmen against the dangers inherent in the industry. If the experience of one town is typical, the greater number of American practitioners

¹ From Journal of the American Medical Association, May 6, 1916. Reprinted here by courtesy of the editors.

² The earliest report quoted by Kobert (*Die Intoxikationen*, Stuttgart, 1906) is English: Letheby, in *Proc. Roy. Soc.*, 1863.

are not prepared to recognize the symptoms of poisoning from these bodies, or to estimate their seriousness. After the introduction, a couple of years ago, of anilin as a compound of rubber in the tire factories of Akron, Ohio, it was some time before the physicians of that city realized what was the cause of the peculiar illness that had appeared among rubber workers; many patients were treated for chronic cardiac disease, and others for epilepsy. Therefore it becomes a very important matter in the interests of public health that the medical profession should know the nature of these substances, their mode of entrance into the body, and the means which must be adopted to protect those exposed in the course of their work.

POISONS USED IN THE MANUFACTURE OF ANILIN AND ANILIN DYES.

A short summary of the processes used in making anilin colors will show that the workmen employed in this industry are exposed to highly poisonous volatile compounds. The process starts with coal tar, which is a mixture of benzene (C_6H_6), toluene, xylene, etc., all of them volatile poisons responsible for a fairly large number of fatal industrial cases in the literature.¹ The benzene is treated with nitric and sulphuric acids to form nitrobenzene ($C_6H_5NO_2$), a poison which, according to Lewin,² has a mortality of 39.3 per cent, and according to von Jaksch,³ of 20 per cent. Then the nitrobenzene is reduced by means of iron filings and hydrochloric acid to anilin ($C_6H_5NH_2$). The most important colors are made by the action of nitrous acid on anilin and the allied aromatic amines. There is opportunity, therefore, for poisoning from benzene, nitrobenzene, and anilin, to say nothing of the multitude of similar bodies used or produced in the various processes, such as the nitrophenols, the nitrochlorbenzenes, and the naphthylamines. Methyl alcohol is one of the reagents used.

Grandhomme,¹ who was for many years attached to the great dye works at Höchst, reported 128 cases of industrial poisoning there, 109 of which were caused by anilin. Leymann,¹ who does not name the factory with which he was connected, gives a record of 171 cases of anilin and toluidin poisoning, and 101 from nitrobenzene and its allied bodies. German rubber works also have had their share of anilin poisoning. The factory inspectors' report for 1908 tells of the occurrence of wholesale poisoning in the extraction of rubber from crude gum. In this instance the workmen, 17 in all, were working in 12-hour shifts in an atmosphere contaminated with anilin fumes. Eleven were poisoned, two being rendered unconscious and requiring hospital care. The following year two instances

¹ Rambousek: Gewerbliche Vergiftungen, Leipzig, 1911, p. 142.

² Lewin: Virchows Arch. f. path. Anat., 1879, lxxvi, p. 443.

³ Von Jaksch: Die Vergiftungen, Vienna, 1912, p. 325.

are reported of anilin poisoning in the recovery of rubber from scrap. Four acute cases developed in one factory, and on examination 15 other men were found to be suffering from chronic poisoning. In the second place, where 25 men were employed, no less than 14 were overcome by the fumes, and 10 of them were ill for more than 10 days.

ANILIN IN INDUSTRY IN THE UNITED STATES.

Aside from the production of anilin colors, the oil is used in this country in the compounding of rubber, especially for tires, and in reclaiming rubber from scrap, for which purposes it has come into increasing demand during the last few years. When the war suddenly shut off the supply from Germany, some rubber manufacturers gave up using it, but others set themselves to provide it by home manufacture, so that now we must add to the men exposed to anilism in rubber manufacture those who are engaged in producing the anilin. Industrial anilin poisoning, which a few years ago was negligible in this country, has suddenly assumed decided importance. So far the making of dyes is too new to have furnished any reported cases; those which are on record come from the rubber industry and from the use of a wash for printers' ink which has anilin as one of its ingredients.

It is impossible to say how much of this substance is used in the United States, or even to say how many plants use it, for the making of rubber, and even more the reclaiming of rubber is an industry fairly hedged about with trade secrets. That is why it was so difficult for Akron physicians to trace this kind of poisoning to its source. It is, however, well known in Akron now, and common enough for the victims to be familiarly known as "blue boys," from the cyanosis which is so prominent a symptom. Since the discovery of the cause of the trouble, the rubber manufacturers have taken measures for the protection of their men, either by installing exhaust ventilators, or simply by warning them to seek the open air as soon as flushing of the face and violent headaches come on. It is said that there is now far less serious poisoning in Akron rubber works.

THE TOXICITY OF ANILIN.

Pure anilin has never been known to cause poisoning; but pure anilin is not used in industry. What we know under this name is a mixture of anilin (amidobenzene) with metatoluidin, paratoluidin and orthotoluidin and xyloidin in varying proportions. Every medical student is familiar with the anilin oil which he uses as a clearing fluid for stained specimens, that golden brown oil with its pleasant nutlike odor. Unlike most volatile poisons, it gives no

warning of its character, for it does not irritate the eyes and throat and is apparently as harmless as cedar oil. Yet according to the researches of K. B. Lehmann,¹ anilin is toxic in even smaller doses than are benzene, chloroform, or carbon disulphid. Toxic symptoms follow the inhaling of from 0.1 to 0.25 gram of anilin, while it takes from 1 to 1.1 gram of carbon disulphid to produce symptoms of poisoning. Anilin volatilizes at room temperature; the boiling point is high, 182 C.

Krause² has reported two instances of poisoning from insignificant quantities of anilin. The men were working in the Zeiss Optical Works in Jena, testing the clarity of rock crystals by dipping them in small receptacles containing anilin, and then holding them up to the light. One man worked alone in a small room, and he felt the effects at the end of his second two-hour shift, complaining of nervousness and exhibiting a marked cyanosis of the skin and mucous membranes. The second was in a larger room in which the fumes were more diluted, and he worked almost four hours before becoming cyanosed. The blue color increased in intensity after a second day's work.

Still more striking in this connection is a nonindustrial case related by Trespe, of a little boy who breathed what must have been a very slight quantity of fume and developed marked symptoms. He slept in the same bed with an older brother who just before going to bed had rubbed some anilin on his frost-bitten fingers, with the result that he himself was severely poisoned and the little fellow moderately poisoned.

SYMPTOMS OF ANILIN POISONING.

These are common to the whole group, including nitrobenzene and its derivatives, though there are minor variations which serve to distinguish anilin poisoning in a typical case. The first symptom noted is weariness, or sleepiness, flushing of the face, a sense of fullness in the head, and even of slight mental confusion, dryness of the throat, and difficulty in swallowing. The color of the face changes from red to livid blue, which may increase to a deep purple. The pulse is rapid and weak, the temperature subnormal. Headache comes on early and is often violent, accompanied by dizziness and nausea, and in the more serious cases there is decided dyspnea, increasing mental confusion, and finally loss of consciousness. Sometimes this occurs suddenly, sometimes not till some hours after the man has left the poisoned atmosphere. The urine at first is usually normal; later it becomes smoky in appearance.

¹ Lehmann, K. B., quoted in Kobert: *Lehrbuch der Intoxikationen*, Stuttgart, ii, 1109.

² Krause: *Med. Klin.*, 1908, iv, 10.

In some cases the subjective symptoms are slight and the man seeks advice because of his livid or blue color, which is alarming to his family. This was true of two cases reported by G. Apfelbach and described further on. Usually industrial cases do not exhibit the severest symptoms, but we have records of instances of epileptoid convulsions and of protracted coma, which sometimes have proved very puzzling to the attending physician. One of these is interesting, illustrating as it does the vasomotor depression which is a feature of this poison.

The patient, who was chief chemist in one of the large rubber companies, was found by his physician suffering from violent headache and nausea. He was profoundly cyanotic. Soon after the physician arrived, a convulsion epileptoid in character came on—the man never had a convulsion before this—and after it he was greatly prostrated. The physician, not knowing that it was a case of anilin poisoning, administered inhalations of amyl nitrite, which very much aggravated the symptoms, and for a while after the patient's condition was most precarious.

Recovery in the milder cases is prompt, the men returning to work on the following day as a usual thing, though the cyanosis often persists for several days more. Severer cases may incapacitate for work during several weeks. Some men are said to establish a tolerance to the poison, and do not suffer a second attack; but it is more usual to find an increased susceptibility following an acute poisoning. Thus in one of the Akron plants in which anilin is being manufactured a foreign workman, who incidentally is said to have been a heavy drinker, was told to fill a drum with anilin, and while doing this he lost consciousness and had to be taken home. The next day he came back to work, but as soon as he entered the room where the oil was being poured into drums he again fainted.

Chronic anilism is described by von Jaksch as a condition resulting from repeated doses of the poison so small as not to set up symptoms of acute poisoning. There are more or less headache, nausea, vertigo, muscular twitchings, disturbances of vision, sense of exhaustion, and loss of strength. The skin is usually livid, or it may be jaundiced. In one instance of chronic poisoning which was reported to us in Akron the man had been treated for chronic heart disease because of his cyanotic appearance and his dyspnea on exertion. He was found to be profoundly anemic, but there was no heart lesion, and he recovered after changing to outdoor work.

We have as yet no record in this country of the occurrence of tumors of the bladder in anilin workers, such as has been described by German observers. These tumors are adenomatous or carcinomatous and are supposedly caused by the irritation by some of the products of anilin decomposition excreted by the kidneys.

MODE OF ENTRANCE OF ANILIN.

The poison may enter through the skin or the lungs, more often by both ways. Birge's¹ cases are instances of pure skin absorption.

Two painters were using anilin-black paint, applying it with a brush and then washing the surface with hot water and soap suds. There were no fumes, but both men were seized with nausea, general weakness, palpitation of the heart, then violent headache, with vomiting in one case and diarrhea in the other. Both passed dark-colored urine. The skin was very pale, the lips blue. The next day they were able to go back to work, and by wearing rubber gloves they avoided a repetition of the trouble.

On the other hand, von Jaksch² reports a case of pure respiratory origin.

A boy of 17 years had been set to work for the first time mixing anilin with other compounds in an open receptacle. Headache came on almost at once, and after four hours' work he was forced to seek the outer air. He went home, and a physician, summoned some hours later, found him in coma, deeply cyanosed, with a weak, rapid pulse and dyspnea. Edema of the lungs developed and did not clear up for four or five days. The coma lasted several hours. In this case anilin could be detected in the urine.

The greater number of industrial cases follow the spilling or splashing of anilin over clothes or skin, and doubtless both skin absorption and lung absorption play their part.

PATHOLOGY OF ANILIN POISONING.

Rambousek³ places anilin and all the nitro and amido derivatives of the aromatic series among the true blood poisons, the principal action of which is to cause the formation of methemoglobin. He attributes all the resulting symptoms to the fact that in place of oxyhemoglobin, with its easily released oxygen, there is methemoglobin, with its firmly bound oxygen, and consequently a condition of "internal suffocation" from lack of oxygen in the tissues. The headache, feeling of anxiety, oppression, weakness, dizziness, dyspnea, and finally loss of consciousness are all caused by the deprivation of oxygen. The later symptoms, icterus, methemoglobinuria, bladder irritation, and bronchitis, are caused by the elimination of the poison. Kobert⁴ lays almost equal stress on the importance of the blood changes; but, unlike Rambousek, he believes that there is also a direct effect on the central nervous system. Curschmann⁵ agrees with the latter that anilin and the anilin group are pure blood poisons, and that all the symptoms are referable to blood changes.

¹ Birge, E. G.: A Probable Case of Anilin Poisoning, *The Journal A. M. A.*, Jan. 24, 1914, p. 314.

² Von Jaksch: *Die Vergiftungen*, Vienna, 1912, p. 325.

³ Rambousek: *Gewerbliche Vergiftungen*, Leipzig, 1911, p. 142.

⁴ The earliest report quoted by Kobert (*Die Intoxikationen*, Stuttgart, 1906) is English: Letheby, in *Proc. Roy. Soc.*, 1863.

⁵ Curschmann: *Tr. Internat. Cong. Indust. Hyg.*, Brussels, 1910.

Experimental studies of these blood changes were made by Price-Jones and Boycott,¹ using anilin hydrochlorid on rabbits. This compound, which is used in rubber manufacture under the name of "anilin salt," is essentially anilin dissolved in hydrochloric acid. These authors succeeded in producing severe poisoning, the hemoglobin falling to 50 per cent. The blood was turbid and brownish, and the spectroscope showed a band almost, but not quite, corresponding to that of methemoglobin. There was a transient leucocytosis, from 30,000 to 40,000, and both the circulating blood and the bone marrow showed evidence of efforts at regeneration of the red corpuscles in the form of megaloblasts, nucleated reds, and basophilic granules. The destruction of cellular elements in the blood was sometimes accompanied by an increase in the total volume.

Malden² examined the blood of 13 men employed in an English factory where anilin dyes and nitrobenzene were made. Six of the 13 had a high red count with a low color index and many imperfectly developed reds. The spectrum of methemoglobin could be detected only when it was present in the proportion of one part to ten of oxyhemoglobin. Loss of hemoglobin ran from 5 to 50 per cent. Stained specimens showed great variations in the size of the red corpuscles, from 5 to 11 microns, the large predominating, but there were no nucleated reds. It is noteworthy that basophilic granules were found in 6 of the 13 men, and Malden believes that this is often the earliest sign of anilin poisoning, as it is of lead poisoning. In pronounced cases there may be 10 or 12 stippled cells in every field. A differential count of whites in 9 cases showed a diminution of polymorphonuclears—marked in 5—with a corresponding increase in small mononuclears. Eosinophils were increased in 3, mast cells in 6.

Malden summarizes the effect on the blood of small repeated doses of anilin thus: Reds increased in number with loss of hemoglobin; low color index; degeneration and imperfect regeneration of red corpuscles; decrease in polymorphous leucocytes, increase in lymphocytes.

DIAGNOSIS OF ANILIN POISONING.

The importance of the blood examination in the diagnosis is very evident. Curschmann advises in all doubtful chronic cases an estimation of the hemoglobin, and if this has fallen 15 or 20 per cent, the man should be kept under observation, for anemia is the earliest symptom. As we have seen, Malden would look for stippled cells first. When toxic symptoms have developed, the presence of hemoglobin in the urine should be looked for. The physician who is not equipped with an apparatus for making blood examinations will

¹ Price-Jones and Boycott: *Guy's Hosp. Rep.*, 1901, lxiii, 309. ² Malden: *Jour. Hyg.*, 1907, vii, 672.

depend on the cyanosis, the dark-colored urine, the odor of anilin in the breath, the rapid pulse of low tension, the dyspnea, and the nervous symptoms, together with the history of employment in a factory in which this group of compounds is handled.

CASES OF INDUSTRIAL ANILIN POISONING IN THE UNITED STATES.

The first cases of this sort that we have been able to discover in the literature were reported in 1913 by G. L. Apfelbach:¹

Two men were referred by factory inspectors to Dr. Apfelbach on account of the marked cyanosis of skin and mucous membranes. The first was a press feeder in a printing establishment who had been using a new sort of roller wash to remove the ink from the press rollers. It was a black oily fluid, which on analysis in the State laboratory was found to contain anilin. On the day when he was seen by the inspector, he had cleaned more rollers than usual, but he had been cyanosed before, though never so profoundly. The symptoms elicited by questioning were headache, mostly occipital, dizziness, pain in the epigastrium, dryness in the throat, and slight difficulty in swallowing, but none of these was severe enough to make him seek medical aid. It was the blue color which alarmed him. His pulse was of high tension, his blood pressure 170 mm. Hg. (the man was 47 years old), but no other abnormality was observed with the exception of the pronounced cyanosis and a slight difficulty in swallowing and in speech. The reflexes were normal. Examination of the blood revealed: Hemoglobin, 100+ per cent; red cells, 5,734,600; white count, 8,200 differential; polymorphonuclears, 72.8 per cent; large mononuclears, 0.5 per cent; small mononuclears, 20.2 per cent. The spectroscope showed methemoglobin lines. The urine was dark, smoky color, specific gravity 1.028, no albumin, no sugar, casts, etc. Employees in this printing shop had noticed the same change of complexion in other men engaged in this work, but never so severe as in this case.

Dr. Apfelbach's second patient was employed in a large dry color factory, mixing colors in an open chaser, work which he had done for several years. Occasionally he would notice that the mixture in the chaser would give off "steam" which made him sick, and this had been true just before he applied to Dr. Apfelbach for advice. The other men in the shop had alarmed him about his blue color, and he himself complained of headache, vertigo, and difficulty in swallowing. The examination in this case was negative except for the presence of methemoglobin in the blood.

Birge's cases, already quoted, were next reported in 1914; and in 1915 E. R. Hayhurst,² in the course of his investigations of Ohio industries, found anilin poisoning in printing shops and rubber works in that State. Three cases had occurred among men employed at rubber mixing mills. The inspectors were also told of more serious poisoning among printing pressmen who used a roller wash rich in anilin. In several instances the use of this had caused loss of consciousness lasting several hours and accompanied with cyanosis.

In the course of an investigation for the Federal Bureau of Labor Statistics of poisonous substances used in the rubber industry, we³

¹ Apfelbach, G. L.: Bull. Dept. Factory Inspection, State of Illinois, 1913.

² Hayhurst, E. R.: Industrial health hazards and occupational diseases in Ohio, Ohio State Board of Health, 1915.

³ Luce, R. V., and Hamilton, Alice: Bul. 179, U. S. Dept. of Labor, Bureau of Labor Statistics.

collected some evidence concerning anilin poisoning in the chief rubber city of the country—Akron, Ohio. Anilin is used as an aid and an accelerator of vulcanization in heat curing of rubber, chiefly in tire works. Five plants in Akron were known to be using it and probably several others did. “Anilin substitute”—perhaps thio-carbanilid—and “anilin salt” (the hydrochlorid) are used in other plants. The danger is found in the room in which the compounds are measured out, on the mills on which the compounds are warmed and mixed together, and even on the calenders, on which the rubber is sheeted. The odor is plainly recognizable in all these places, unless special precautions are taken to prevent fumes by providing tightly covered receptacles and by good exhaust ventilation over the mills.

As rubber reclaiming is a process carefully guarded from the public because of trade secrets, it was not possible for us to visit any of these plants; but we found reason to believe that most of the cases of anilin poisoning in Akron—as is true in Germany—come from this branch of the industry. Not only the secrecy of the processes made it difficult to collect evidence of anilin poisoning, but also the fact that foremen and superintendents are naturally unwilling to admit that there is any danger from a substance which is in use in the factory. If, however, they are no longer using it, they may be quite willing to tell of its disadvantages. In a tire factory when no more anilin could be procured, the foreman said frankly that he was thankful not to have to handle it any more, for he had had so much trouble from the fumes among the men at the mills.

An interesting case indirectly connected with the rubber industry was described by an Akron physician. An old boiler was sold by one of the rubber factories, and the boiler repairer who undertook to clean it and put it in order had a typical attack of anilin poisoning.

The manufacture of anilin from benzene had begun only a short time before our investigation in Akron, but already one factory had a daily output of about 2,500 pounds and employed about 14 men in two 12-hour shifts. In spite of a good system of exhaust ventilation which is said to have been installed, the men suffered from the fumes, and we were told that during the first four months of operation the factory lost no less than 15 men from this cause, though it was not easy at that time to find work in Akron.

Shortly before the investigation referred to above, a severe case of anilism had occurred in one of the rubber factories. In this instance the poison seems to have entered both by the skin and by the lungs.

The patient was admitted to the city hospital of Akron in a state of coma that lasted nine hours. He was deeply cyanosed, his temperature was 97.6, and pulse 116, fluttering and weak. The reflexes were normal save for a slight sluggishness of the

pupils. Urine examination was negative. The patient was put to bed and given inhalations of oxygen and heart stimulants, aromatic spirits of ammonia, camphorated oil, strychnine, and digalen. The temperature remained subnormal for six hours. After nine hours he regained consciousness and was discharged the following day, feeling a little weak and slightly nauseated, but otherwise normal.

His history was as follows: He was working in one of the rubber factories, and at about 1 p. m. he spilled a can of liquid over his clothes. He said it had a peculiar alcoholic odor, and when it came in contact with his skin it felt burning. The fumes were very noticeable, but he kept on at his work for about two hours more, though conscious that something was wrong. Then he began to have severe palpitation of the heart, he noticed that his face was flushed, he grew dizzy, and a violent headache came on, and presently nausea, and he vomited several times. He was taken to his home, where the cyanosis kept increasing in intensity, and at about 6 in the evening he lost consciousness and was brought to the hospital. Consciousness returned at about 3 in the morning. Investigation showed that the fluid he had spilled was anilin.

Since the publication of the Government report, several additional cases have been observed by one of us in connection with the rubber industry in Akron. One of them is of special interest in that we have accurate data as to the exact time of exposure to the fumes before the onset of very typical symptoms of the more intense, acute form of poisoning.

J. E. was first seen July 24, 1915. He was in profound coma, his breathing was stertorous, and his pulse was irregular and of very poor quality. He was so cyanosed that the skin over his whole body was a deep plum color. That morning at 7 he had gone to work feeling perfectly well in every way, and, according to the history obtained, he was exposed to fumes of anilin for 1 hour and 40 minutes before he began to notice any symptoms of depression. First came throbbing in the head and increasing nausea, which he thought were due to the hot weather and the poorly ventilated room. He next noticed palpitation of the heart, and then a violent headache came on, increasing in intensity and accompanied by vertigo. As he said, "I felt as if I had been standing on my head for a long time and that every ounce of blood in my body had rushed to my brain." The dizziness increased and he lost consciousness completely about 45 minutes after the onset of the first symptoms. He was picked up by the other workmen and rushed to the hospital, where oxygen was administered as well as heart stimulants, but apparently with little effect. The cyanosis persisted, the heart action was very feeble and remained so for over 16 hours, and he did not regain consciousness till the morning of July 25, a period of about 22 hours.

A catheterized specimen of urine obtained on admission showed nothing of note, but a second examination was made 18 hours later, when it was found to be smoky, specific gravity 1.022, there was a trace of albumin, no sugar, and the presence of hemoglobin was detected by the Heller test and by the Schönbein-Almén turpentine-guaiac test, which is even more delicate than the spectroscopic. This hemoglobinuria persisted for five days.

A blood examination made on entrance gave normal findings in all respects except for a slight eosinophilia, but four days later there were stippled red cells and some irregularity in the size and shape of the reds. The hemoglobin then was 75 per cent (Sahli).

The patient suffered from severe headache for five days and complained of weakness and exhaustion for at least two weeks longer, after which he improved slowly. He was warned not to expose himself to this danger again.

The second case is cited because it is representative of the slower and much less typical forms of anilin poisoning: H. M., a chemist employed in the research laboratories of one of the large rubber companies of Akron, was seen November 1, 1915. He complained of palpitation of the heart, dizziness, marked muscular weakness, occasional nausea, and violent headaches. On close questioning it became evident that the palpitation of the heart was worse and headache was more apt to come on during active work, and that this work often consisted in the handling of a compound containing anilin. Most of the work was carried on under a hood, but he admitted that the odor of anilin was at times quite noticeable. He had been doing this sort of work for months, and said that he had never been cyanosed and never had had to lose a day from the laboratory.

An examination of the urine showed nothing abnormal: The red cell count was 5,400,000, but the hemoglobin only 68 per cent, and a stained smear showed pale, unevenly staining reds. Physical examination revealed nothing of note except a rapid heart action; the pulse was 94.

On this scanty evidence the patient was advised to give up his work and find some outdoor occupation, which he did, and as a result the symptoms disappeared entirely in six weeks.

The third patient, a lad of 18 years, was also employed in the research laboratories of one of the rubber companies. He was given a special problem to work on, which involved the grinding and mixing of certain compounds together with anilin. He did it in a corner of the room where the fumes could not spread and expose the other workmen. After working in this way for a few weeks he began to suffer from a dull headache, which persisted all day. Then one day he became conscious of a severe throbbing in his head, and his face became cyanotic. He stopped work for the day and came back the next morning feeling fairly well, but it so happened that the ventilation was unusually poor that morning and the fumes very noticeable. After just one hour's work he lost consciousness and remained in a deep coma for over 24 hours. He was very cyanotic and his heart action was weak; at times he was almost pulseless. Camphorated oil administered hypodermically seemed to exert a better effect than did the oxygen which was given continuously for 12 hours. In this case no blood examination was made; the urine was at first bright red, later a smoky black.

Examination of the histories of a large number of cases of anilin poisoning reveals interesting facts as to the varying susceptibility of men to this poison. We have already noted the increased sensitiveness of heavy drinkers. It seems also that men of dark hair and complexion are less susceptible than blonds, as has been observed in one of the large rubber works where records have been kept of over 50 cases of poisoning. Furthermore, it is found that young men are more susceptible than are the middle-aged, especially to the acute, violent form of anilism.

CONCLUSIONS.

Commercial anilin is a well-known industrial poison in Germany and in Great Britain. It is just beginning to be known in the United States, where it has already been the cause of numerous cases of poisoning among men engaged in the manufacture of rubber goods, in reclaiming rubber from scrap, in making anilin from benzene, and in using certain washes for press rollers.

It is a blood poison, causing the formation of methemoglobin with the consequent "internal suffocation."

Poisoning may take place through the skin or the lungs. Usually in industrial cases both portals of entry play a part.

Exposure to the fumes need not be excessive or long-continued to bring about serious symptoms in the susceptible.

Young men are more susceptible than the old or middle aged, blonds than dark-haired men, heavy drinkers than the temperate.

Hot, humid weather, heated rooms, and poor ventilation are important factors in the production of acute anilin poisoning.

Early recognition of anilin poisoning is of prime importance so that the sufferer may be withdrawn from the danger of further exposure to the poison.

Men working in anilin constantly seem to acquire a certain amount of tolerance to it; nevertheless, if the exposure is increased beyond the point of tolerance, there is apparently a cumulative effect, and symptoms of chronic poisoning result. After symptoms of poisoning have once manifested themselves, the patient is usually hypersensitive to the fumes.

The treatment consists in fresh air, oxygen, and heart stimulants, especially camphorated oil. Prevention of subsequent exposure is imperative.

CONCILIATION WORK OF THE DEPARTMENT OF LABOR, APRIL 16 TO MAY 15, 1916.

On the authority contained in the organic act of the department to mediate in labor disputes and to appoint commissioners of conciliation in its discretion, the Secretary of Labor, through the commissioners of conciliation, exercised his good offices in 39 labor disputes between April 16 and May 15, 1916.

The companies involved in these controversies, the number of employees affected, and the results secured, as far as available, are shown in the following statement:

NUMBER OF LABOR DISPUTES HANDLED BY THE DEPARTMENT OF LABOR,
THROUGH ITS COMMISSIONERS OF CONCILIATION, APR. 16 TO MAY 15, 1916.

Name.	Workmen affected—		Result.
	Directly.	Indirectly.	
.....	742	30,000	Pending
sy.....	900	300	Do.
.....	2,500	700	Do.
s.....	200	50	Adjusted.
sy.....	425	.....	Pending.
.....	820	2,000	Do.
.....	36,000	.....	Do.
n and	1,000	7,000	Adjusted.
sy.....	451	.....	Pending.
.....	3,000	3,000	Do.
.....	4,000	6,000	Adjusted.
.....	30	.....	Do.
.....	20	.....	Pending.
.....	12	.....	Do.
.....	12	.....	Do.
.....	18	.....	Adjusted.
.....	75	.....	Pending.
.....	12	.....	Do.
.....	100	.....	Do.
.....	24	.....	Do.
.....	18	.....	Do.
.....	14	.....	Do.
.....	150	.....	Do.
.....	8	.....	Do.
.....	60	.....	Do.
.....	20	.....	Adjusted.
.....	12	.....	Pending.
.....	8	.....	Do.
.....	45	.....	Do.
.....	20	.....	Do.
.....	12	.....	Adjusted.
.....	608	.....	Do.
.....	50	.....	Do.
.....	260	.....	Do.
.....	15	.....	Do.
.....	.....	.....	Pending.

Adjustments have been effected in the following cases which were noted in the statement submitted April 15, 1916, and printed in the May issue of the MONTHLY REVIEW:

Hancock Knitting Mills, Philadelphia.
Cramp Ship Building Yards, Philadelphia.
Chicago & Alton Railroad Co.

FEDERAL EMPLOYMENT WORK OF THE DEPARTMENT OF
LABOR.

During April, 1916, the Division of Information of the Bureau of Immigration of the Department of Labor placed 7,653 persons in employment as compared with 7,030 during March, 1916. As there were 13,498 applications for work, 57 per cent were placed in April as compared with 36 per cent for March. This is the largest proportion since May, 1915. The operations of the division by

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months since May, 1915, when fuller reports began to be made, are contained in the following statement:

OPERATIONS OF THE DIVISION OF INFORMATION, BUREAU OF IMMIGRATION, DURING THE MONTHS OF MAY, 1915, TO APRIL, 1916.

Month.	Number of applications for help.	Number of persons applied for.	Number of applicants for places.	Number referred to employment.	Number actually employed.	Per cent of applicants placed.
1915.						
May.....	638	3,826	12,132	3,752	3,495	28.81
June.....	1,249	3,601	14,530	5,131	4,646	31.98
July.....	1,160	8,665	18,061	6,360	6,035	33.41
August.....	1,279	7,931	17,827	7,321	6,757	37.90
September.....	1,201	4,551	13,334	5,671	5,405	40.54
October.....	1,104	5,423	12,215	5,460	5,006	40.98
November.....	847	4,650	11,908	4,459	4,146	34.82
December.....	698	3,588	11,902	2,622	2,170	18.23
1916.						
January.....	933	5,063	16,015	4,300	3,419	22.78
February.....	1,423	6,413	14,257	5,036	4,185	29.35
March.....	3,443	10,209	19,484	8,113	7,030	36.08
April.....	3,806	12,104	13,498	8,843	7,653	56.70

The following statement of the employment work of the 18 separate zones of operation covering the whole country gives the usual details for March and April, 1916:

SUMMARY OF ACTIVITIES FOR THE MONTHS OF MARCH AND APRIL, 1916.

Zone.	Opportunities received.				Applications for employment.					
	Applications for help.		Persons applied for.		Applications received.		Referred to employment.		Number actually employed.	
	March.	April.	March.	April.	March.	April.	March.	April.	March.	April.
1. Boston, Mass.....	2	4	50	15	73	48	10	14	6	11
Portland, Me.....										
Total.....	2	4	50	15	73	48	10	14	6	11
2. New York, N. Y.....	157	278	789	999	1,229	668	785	487	637	424
Buffalo, N. Y.....	60	94	791	1,009	811	527	703	515	600	307
Total.....	217	372	1,580	2,088	2,040	1,195	1,488	1,002	1,237	731
3. Philadelphia, Pa.....	113	133	1,371	600	413	329	384	266	230	194
Pittsburgh, Pa.....	30	21	176	522	774	291	319	128	148	40
Total.....	143	154	1,547	1,122	1,187	620	703	394	378	234
4. Baltimore, Md.....	15	16	17	18	158	94	137	87	137	87
5. Norfolk, Va.....	20	22	215	50	104	69	25	124	59	79
6. Jacksonville, Fla.....	2		6		16	93	1	62		13
Charleston, S. C.....	3		226		52	38	54	15	28	15
Miami, Fla.....	8	11	16	21	98	56	18	9	7	9
Mobile, Ala.....					6	14				
Savannah, Ga.....	3	4	30	22	37	55	30	22	20	17
Total.....	16	15	278	43	209	256	103	108	55	54
7. New Orleans, La.....	3	3	5	3	214	196	17	12	2	1
Gulfport, Miss.....	3	1	3	6	64	38	3	7		
Memphis, Tenn.....	1		20		23		2		2	
Total.....	7	4	28	9	301	234	22	19	4	1

SUMMARY OF ACTIVITIES FOR THE MONTHS OF MARCH AND APRIL, 1916—Concl'd.

Zone.	Opportunities received.				Applications for employment.					
	Applications for help.		Persons applied for.		Applications received.		Referred to employment.		Number actually employed.	
	March.	April.	March.	April.	March.	April.	March.	April.	March.	April.
8. Galveston, Tex.....	3	1	9	2	64	59	13	21	8	3
Amarillo, Tex.....										
Brownsville, Tex.....						1		1		
Eagle Pass, Tex.....					1					
Albuquerque, N. Mex.....						5				
Houston, Tex.....	1		1		78	35		1		1
Laredo, Tex.....										
San Angelo, Tex.....	1		1		5		1			
Total.....	5	1	11	2	148	100	14	23	8	4
9. Cleveland, Ohio.....	90	26	100	34	113	96	88	62	34	25
10. Chicago, Ill.....	138	128	952	2,086	6,152	2,138	950	1,134	924	1,118
Detroit, Mich.....	158	160	523	824	376	402	288	396	288	396
Indianapolis, Ind.....	51	103	225	498	257	590	247	522	247	522
Saulte Ste. Marie, Mich.....	5	15	33	78	64	47	46	43	42	43
Total.....	352	406	1,733	3,486	6,849	3,177	1,531	2,095	1,501	2,079
11. Minneapolis, Minn.....	156	68	164	76	162	64	69	51	60	51
12. St. Louis, Mo.....	29	26	610	158	227	179	61	110	49	89
Kansas City, Mo.....	61	190	125	309	591	698	203	315	97	185
Total.....	90	216	735	467	818	877	264	425	146	274
13. Denver, Colo.....	12	11	15	29	70	21	40	18	7	7
Salt Lake City, Utah.....						2				
Total.....	12	11	15	29	70	23	40	18	7	7
14. Helena, Mont.....	3	6	4	6	11	3	7	2		2
Moscow, Idaho.....		3		3		4		5		3
Total.....	3	9	4	9	11	7	7	7		5
15. Seattle, Wash.....	72	65	120	132	512	808	110	129	101	123
Aberdeen, Wash.....	33	22	98	65	230	245	98	65	98	64
Bellingham, Wash.....	26	41	63	96	179	129	59	86	50	78
Everett, Wash.....	15	5	21	14	53	48	21	20	16	14
North Yakima, Wash.....	352	331	563	504	980	957	542	481	512	470
Spokane, Wash.....	81	75	110	145	139	225	100	132	97	132
Tacoma, Wash.....	162	205	465	479	1,421	620	465	479	465	471
Walla Walla, Wash.....	138	167	235	228	343	218	180	177	179	176
Total.....	879	911	1,675	1,663	3,857	3,250	1,575	1,569	1,518	1,528
16. Portland, Oreg.....	946	982	1,043	1,900	783	1,115	910	1,584	906	1,434
17. San Francisco, Cal.....	216	277	281	475	1,286	1,113	305	426	248	308
Fresno, Cal.....										
Total.....	216	277	281	475	1,286	1,113	305	426	248	308
18. Los Angeles Cal.....	1		2		557	343	1		1	
Bakersfield, Cal.....		1		6	3	8		5		5
San Diego, Cal.....	273	310	731	692	753	809	821	830	716	686
Tucson, Ariz.....					2					
Total.....	274	311	733	698	1,315	1,160	822	835	717	691
Total for month.....	3,443	3,805	10,209	12,104	19,484	13,498	8,113	8,843	7,030	7,653

WORK OF STATE AND MUNICIPAL EMPLOYMENT BUREAUS.

In the following table data are presented relative to the operations of free public employment offices. The table furnishes information for State employment bureaus in 14 States, municipal employment bureaus in 8 States, a State-city employment bureau in 1 State, a city-private employment bureau in 1 State, and a Federal-municipal employment bureau in 1 State. Figures are given for both April, 1915, and April, 1916, in cases where reports have been received for both periods; in other cases the only information reported was for April, 1916.

OPERATIONS OF FREE PUBLIC EMPLOYMENT OFFICES, APRIL, 1915 AND 1916.

State and city.	Number of—					Positions filled.
	Applications from employers.	Persons asked for by employers.	Persons applying for work.		Persons referred to positions.	
			New registrations.	Re-novels.		
<i>California (municipal).</i>						
Berkeley:						
April, 1915.....	191	222	134	703	222	222
April, 1916.....	205	218	61	307	215	215
Sacramento:						
April, 1915.....	218	240	84	(1)	240	240
April, 1916.....	217	355	56	(1)	355	355
<i>California (State).</i>						
Oakland: April, 1916.....	524	692	680	154	788	590
Sacramento: April, 1916.....	214	481	553	38	431	384
San Francisco: April, 1916.....	760	1,971	2,127	299	1,785	1,513
<i>Colorado (State).</i>						
Colorado Springs:						
April, 1915.....	(1)	500	(1)	(1)	(1)	464
April, 1916.....	(1)	617	718	(1)	556	(1)
Denver, No. 1:						
April, 1915.....	(1)	209	(1)	(1)	(1)	186
April, 1916.....	(1)	297	257	(1)	185	(1)
Denver, No. 2:						
April, 1915.....	(1)	227	(1)	(1)	(1)	190
April, 1916.....	(1)	316	376	(1)	267	(1)
Pueblo:						
April, 1915.....	(1)	72	(1)	(1)	(1)	72
April, 1916.....	(1)	485	394	(1)	353	(1)
<i>Connecticut (State).</i>						
Bridgeport:						
April, 1915.....	321	(1)	(1)	(1)	(1)	292
April, 1916.....	741	(1)	(1)	(1)	(1)	674
Hartford:						
April, 1915.....	230	(1)	(1)	(1)	(1)	200
April, 1916.....	830	(1)	(1)	(1)	(1)	546
New Haven:						
April, 1915.....	256	(1)	(1)	(1)	(1)	204
April, 1916.....	565	(1)	(1)	(1)	(1)	436
Norwich:						
April, 1915.....	38	(1)	(1)	(1)	(1)	31
April, 1916.....	273	(1)	(1)	(1)	(1)	259
Waterbury:						
April, 1915.....	158	(1)	(1)	(1)	(1)	127
April, 1916.....	204	(1)	(1)	(1)	(1)	158
<i>Illinois (municipal).</i>						
Chicago: April, 1916.....	58	2,030	500	(1)	2,030	778

¹ Not reported.² Number of requisitions.

OPERATIONS OF FREE PUBLIC EMPLOYMENT OFFICES, APRIL, 1915 AND 1916—Contd.

State and city.	Number of—					Positions filled.
	Applications from employers.	Persons asked for by employers.	Persons applying for work.		Persons referred to positions.	
			New registrations.	Re-newals.		
<i>Illinois (State).</i>						
Chicago:						
April, 1915.....	2,045	(1)	(1)	(1)	(1)	1,550
April, 1916.....	6,536	(1)	(1)	(1)	(1)	5,841
East St. Louis:						
April, 1915.....	421	(1)	(1)	(1)	(1)	421
April, 1916.....	1,603	(1)	(1)	(1)	(1)	1,220
Peoria:						
April, 1915.....	614	(1)	(1)	(1)	(1)	610
April, 1916.....	1,345	(1)	(1)	(1)	(1)	1,002
Rock Island-Moline:						
April, 1915.....	230	(1)	(1)	(1)	(1)	230
April, 1916.....	781	(1)	(1)	(1)	(1)	637
Rockford:						
April, 1915.....	436	(1)	(1)	(1)	(1)	410
April, 1916.....	1,152	(1)	(1)	(1)	(1)	831
Springfield:						
April, 1915.....	249	(1)	(1)	(1)	(1)	248
April, 1916.....	606	(1)	(1)	(1)	(1)	512
<i>Indiana (State).</i>						
Evansville:						
April, 1915.....	(1)	148	² 226	(1)	140	134
April, 1916.....	(1)	153	² 207	(1)	142	134
Fort Wayne:						
April, 1915.....	(1)	213	² 221	(1)	216	206
April, 1916.....	(1)	463	² 360	(1)	330	306
Indianapolis:						
April, 1915.....	(1)	230	² 375	(1)	240	217
April, 1916.....	183	654	² 720	(1)	628	548
South Bend:						
April, 1915.....	(1)	271	² 483	(1)	247	231
April, 1916.....	(1)	731	² 549	(1)	480	447
<i>Kansas (State).</i>						
Topeka:						
April, 1915.....	20	25	60	6	32	17
April, 1916.....	38	51	114	1	64	43
<i>Kentucky (city-private).</i>						
Louisville:						
April, 1915.....	(1)	92	322	862	93	61
April, 1916.....	(1)	285	405	735	213	124
<i>Kentucky (State).</i>						
Louisville:						
April, 1915.....	64	64	260	(³)	64	64
April, 1916.....	139	139	268	(³)	139	139
<i>Massachusetts (State).</i>						
Boston:						
April, 1915.....	1,327	1,534	⁴ 925	(1)	⁵ 2,646	1,276
April, 1916.....	2,561	2,870	⁴ 1,262	(1)	⁵ 3,724	1,743
Fall River:						
April, 1915.....	107	113	⁴ 17	(1)	⁵ 99	88
April, 1916.....	147	151	⁴ 27	(1)	⁵ 142	129
Springfield:						
April, 1915.....	596	622	⁴ 228	(1)	⁵ 773	496
April, 1916.....	1,036	1,258	⁴ 512	(1)	⁵ 1,460	913
Worcester:						
April, 1915.....	604	717	⁴ 568	(1)	⁵ 1,009	487
April, 1916.....	1,247	1,710	⁴ 698	(1)	⁵ 1,553	779
<i>Michigan (State).</i>						
Detroit:						
April, 1915.....	1,129	3,147	(1)	(1)	(1)	2,841
April, 1916.....	1,336	6,372	(1)	(1)	(1)	5,717
Kalamazoo:						
April, 1915.....	(1)	(1)	² 318	(1)	(1)	(1)
April, 1916.....	415	415	² 380	(1)	451	(1)
Saginaw: April, 1916.....	126	868	² 741	(1)	741	741

¹ Not reported.² Number applying for work.³ Every applicant must register each month.⁴ Number who were registered.⁵ Number of offers of positions.

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OPERATIONS OF FREE PUBLIC EMPLOYMENT OFFICES, APRIL, 1915 AND 1916—Contd.

State and city.	Number of—					Positions filled.
	Applications from employers.	Persons asked for by employers.	Persons applying for work.		Persons referred to positions.	
			New registrations.	Re-novels.		
<i>Minnesota (State).</i>						
Duluth:						
April, 1915.....	(1)	(1)	(1)	(1)	(1)	686
April, 1916.....	(1)	(1)	(1)	(1)	(1)	976
Minneapolis:						
April, 1915.....	(1)	(1)	(1)	(1)	(1)	2,406
April, 1916.....	2,347	(1)	(1)	(1)	(1)	2,245
St. Paul:						
April, 1915.....	(1)	(1)	(1)	(1)	(1)	1,235
April, 1916.....	(1)	(1)	(1)	(1)	(1)	1,304
<i>Montana (municipal).</i>						
Butte:						
April, 1915.....	200	(1)	220	(1)	220	494
April, 1916.....	404	(1)	518	(1)	194	371
<i>New York (municipal).</i>						
New York City:						
April, 1915.....	317	379	1,861	(1)	717	299
April, 1916.....	2,248	2,509	2,094	(1)	2,988	1,871
<i>New York (State).</i>						
Albany: April, 1916.....	507	649	464	250	638	312
Brooklyn: April, 1916.....	1,422	2,126	1,456	349	2,093	1,164
Buffalo: April, 1916.....	909	1,152	466	251	1,029	673
Rochester: April, 1916.....	1,204	1,814	808	280	1,473	751
Syracuse: April, 1916.....	893	1,093	599	102	996	716
<i>Ohio (State-city).</i>						
Akron:						
April, 1915.....	(1)	813	1,359	2,548	748	503
April, 1916.....	(1)	1,905	556	1,226	1,384	1,141
Cincinnati:						
April, 1915.....	(1)	2,942	1,531	4,762	2,116	2,712
April, 1916.....	(1)	2,410	1,695	2,933	2,061	1,312
Cleveland:						
April, 1915.....	(1)	3,477	2,347	10,840	3,482	3,626
April, 1916.....	(1)	9,258	2,208	7,079	6,651	5,511
Columbus:						
April, 1915.....	(1)	1,649	744	3,474	1,544	1,384
April, 1916.....	(1)	2,819	745	2,297	2,437	2,011
Dayton:						
April, 1915.....	(1)	728	716	1,963	683	603
April, 1916.....	(1)	1,258	717	1,195	1,041	893
Toledo:						
April, 1915.....	(1)	1,050	1,237	2,605	939	898
April, 1916.....	(1)	3,764	1,103	2,118	2,516	2,176
Youngstown:						
April, 1915.....	(1)	573	1,070	1,695	552	477
April, 1916.....	(1)	1,267	648	918	1,112	974
<i>Oklahoma (State).</i>						
Enid:						
April, 1915.....	(1)	(1)	(1)	(1)	(1)	83
April, 1916.....	105	(1)	132	(1)	(1)	99
Muskogee:						
April, 1915.....	(1)	(1)	(1)	(1)	(1)	74
April, 1916.....	163	(1)	187	(1)	(1)	170
Oklahoma City:						
April, 1915.....	(1)	(1)	(1)	(1)	(1)	144
April, 1916.....	311	(1)	283	(1)	(1)	247
Tulsa:						
April, 1915.....	(1)	(1)	(1)	(1)	(1)	(1)
April, 1916.....	337	(1)	324	(1)	(1)	246

¹ Not reported.² Including 1 on city work.³ Including 251 on city work and 260 on emergency work in parks.⁴ Number applying for work.

OPERATIONS OF FREE PUBLIC EMPLOYMENT OFFICES, APRIL, 1915 AND 1916—Concl'd.

State and city.	Number of—					Posi- tions filled.
	Applica- tions from employ- ers.	Persons asked for by employ- ers.	Persons applying for work.		Persons referred to posi- tions.	
			New registra- tions.	Re- newals.		
<i>Oregon (municipal).</i>						
Portland: April, 1916.....	(1)	1,655	795	.....	(1)	1,345
<i>Pennsylvania (State).</i>						
Altoona: April, 1916.....	(1)	213	103	(1)	67	
Harrisburg: April, 1916.....	(1)	436	146	46	286	53
Johnstown: April, 1916.....	(1)	306	117	79	101	246
Philadelphia: April, 1916.....	(1)	438	709	119	366	44
Pittsburgh: April, 1916.....	(1)	1,488	612	11	495	243
						455
<i>Rhode Island (State).</i>						
Providence: April, 1915.....	525	594	404	134	(1)	594
April, 1916.....	350	456	294	283	(1)	456
<i>Texas (municipal).</i>						
Dallas: April, 1915.....	61	67	103	40	195	67
April, 1916.....	144	195	45	.....	218	195
Fort Worth: April, 1915.....	74	89	2 844	(1)	94	85
April, 1916.....	82	115	127	63	93	88
<i>Virginia (municipal).</i>						
Richmond: April, 1915.....	123	240	2 673	(1)	296	254
April, 1916.....	198	359	572	(1)	387	159
<i>Washington (Federal-municipal).</i>						
Tacoma: April, 1915.....	176	228	(1)	(1)	229	228
April, 1916.....	501	1,003	525	230	919	901
<i>Washington (municipal).</i>						
Everett: April, 1915.....	(1)	(1)	(1)	(1)	(1)	172
April, 1916.....	(1)	(1)	(1)	(1)	(1)	408
Seattle: April, 1916.....	2,898	4,993	(1)	(1)	5,126	4,589
Spokane: April, 1915.....	(1)	(1)	(1)	(1)	885	803
April, 1916.....	2,460	2,460	40	.....	2,154	2,154
<i>Wisconsin (State).</i>						
La Crosse: April, 1915.....	174	209	2 392	(1)	194	123
April, 1916.....	192	254	2 299	(1)	225	112
Milwaukee: April, 1915.....	1,630	1,924	2 2,859	(1)	2,107	1,304
April, 1916.....	2,239	3,901	2 2,840	(1)	3,014	2,110
Oshkosh: April, 1915.....	199	226	2 395	(1)	181	159
April, 1916.....	256	324	2 296	(1)	234	180
Superior: April, 1915.....	359	420	2 662	(1)	486	323
April, 1916.....	325	443	2 557	(1)	473	300

¹ Not reported.² Number applying for work.³ Registrations.

EMPLOYMENT IN SELECTED INDUSTRIES IN APRIL, 1916.

Two tables are here presented showing the changes in the amount of employment in nearly 500 representative establishments in 10 manufacturing industries between March, 1916, and April, 1916, and between April, 1915, and April, 1916.

From an examination of the first table, it will be seen that the number of employees in April, 1916, was greater than in April, 1915, in all industries except cotton manufacturing. The greatest increase shown was in car building and repairing, in which industry the increase was 62.4 per cent. More money was paid out in wages in all the industries covered in April, 1916, than in April, 1915. The greatest increase in the amount of the pay roll was in the car-building and repairing industry, where the increase was 85.6 per cent. The smallest increase shown is 7.4 per cent for the cotton manufacturing industry.

COMPARISON OF EMPLOYMENT IN IDENTICAL ESTABLISHMENTS IN APRIL, 1915, AND APRIL, 1916.

Industry.	Es- tab- lish- ments to which inqui- ries were sent.	Es- tab- lish- ments re- port- ing for April, both years.	Period of pay roll	Number on pay roll in April—		Per cent of in- crease (+) or de- crease (-).	Amount of pay roll in April—		Per cent of in- crease (+) or de- crease (-).
				1915	1916		1915	1916	
Boots and shoes.....	86	66	1 week...	39,905	51,143	+ 28.2	\$416,288	\$658,510	+ 58.2
Cotton manufacturing.....	92	60	do....	53,451	55,755	+ 1.2	462,255	496,250	+ 7.4
Cotton finishing.....	19	17	do....	13,107	13,772	+ 5.1	142,061	159,675	+ 12.4
Hosiery and underwear.....	82	55	do....	26,307	29,240	+ 11.1	220,308	280,104	+ 27.1
Woolen.....	56	49	do....	37,313	41,574	+ 11.4	386,933	487,720	+ 26.0
Silk.....	64	48	2 weeks..	15,307	17,075	+ 11.6	282,434	300,224	+ 27.5
Men's ready-made cloth- ing.....	86	37	1 week..	13,627	16,474	+ 20.9	141,856	214,553	+ 51.2
Iron and steel.....	142	96	1 month..	107,099	139,920	+ 30.6	3,312,324	5,062,726	+ 52.5
Car building and repairing.....	80	37	do....	27,727	45,036	+ 62.4	804,562	1,493,026	+ 85.6
Cigar manufacturing.....	107	68	1 week..	22,384	23,062	+ 3.0	207,663	226,859	+ 9.2

In the second table comparing March, 1916, and April, 1916, half of the industries listed show an increase in April over March in the number of employees on the pay roll, and the other half show a reduction. The greatest reduction was 4.7 per cent in the cotton-finishing industry. As to the money paid in wages to employees, half of the industries again show an increase and the other half a reduction. It should be noted that the industries do not in all cases fall in the same group as to increase or decrease in money paid and as to increase or reduction in the number of employees on the pay roll.

COMPARISON OF EMPLOYMENT IN IDENTICAL ESTABLISHMENTS IN MARCH, 1916,
AND APRIL, 1916.

Industry.	Es- tab- lish- ments to which inquiries were sent.	Es- tab- lish- ments re- port- ing for March and April.	Period of pay roll.	Number on pay roll in—		Per cent of in- crease (+) or de- crease (-).	Amount of pay roll in—		Per cent of in- crease (+) or de- crease (-).
				March, 1916.	April, 1916.		March, 1916.	April, 1916.	
Boots and shoes.....	86	63	1 week...	49,713	49,134	-1.2	\$662,886	\$635,645	-4.1
Cotton manufacturing.....	92	59	do.....	55,113	55,105	— (1)	499,027	494,908	+1.2
Cotton finishing.....	19	17	do.....	14,451	13,772	-4.7	165,538	159,675	-3.5
Hosiery and underwear....	82	57	do.....	30,155	30,423	+ .9	287,349	287,947	+ .2
Woolen.....	56	14	do.....	17,606	17,324	+1.6	191,869	194,682	+1.5
Silk.....	64	47	2 weeks..	16,766	16,934	+1.0	357,698	354,750	— .8
Men's ready-made cloth- ing.....	86	35	1 week..	16,175	16,064	— .6	209,730	208,560	— .6
Iron and steel.....	142	99	1 month	140,748	140,467	— .2	5,053,783	5,055,585	+ (1)
Car building and repairing.	80	37	do.....	45,271	45,298	+ .1	1,490,787	1,500,156	+1.3
Cigar manufacturing.....	107	64	1 week..	21,550	22,303	+3.5	216,970	212,786	-1.9

1 Less than one-tenth of 1 per cent.

In addition to the data presented in the above tables concerning the number of employees on the pay roll, 76 plants in the iron and steel industry reported 108,582 employees actually working on the last full day of the pay period reported for in April, 1916, against 86,025 in the reported pay period in April, 1915, an increase of 26.2 per cent. Figures furnished by 87 plants in the same industry show that 112,572 employees were actually working on the last full day of the pay period reported for in April, 1916, against 115,632 for the reported period in March, 1916, a decrease of 2.6 per cent.

EMPLOYMENT IN THE STATE OF NEW YORK IN APRIL, 1916.

A statement concerning manufacturing activity in the State of New York in April issued by the New York State Industrial Commission is here reproduced.

A record volume of business was transacted during April by the factories of New York State, the number of employees being 21 per cent greater and wages paid being 37 per cent greater than one year ago. Business was more active in April than in March, April pay rolls carrying 3 per cent more operatives and 5 per cent more wages than in the previous month. These facts are brought out * * * from reports submitted by over 1,300 representative manufacturers with nearly a half million employees scattered throughout the State.

The most important increases in activity over the preceding month, measured by amount of wages paid, were in the chemicals, oils, and paints group, in the stone, clay, and glass products group, and in the metals, machinery, and conveyances group, each of which showed a gain of approximately one-tenth. The largest increases in

activity over last year were shown in April by the metals, machinery, and conveyances group and by the furs, leather, and rubber goods group.

The stone, clay, and glass group was a tenth more active in April than in March. This increase was largely seasonal; the greatest improvement was in the brick, tile, and pottery industry. The glass industry in April did only 90 per cent as much business as in March. The group as a whole, however, did a third larger April business this year than last. The wood manufactures group, although showing no change in volume of business between March and April, is doing a fifth more business than last year.

The metals, machinery, and conveyances group employed 6 per cent more operatives and paid 7 per cent more in wages in April than in March. The most important increases were in the brass, copper, and aluminum industry, in the sheet metal and hardware industry, in the cutlery, tools, and firearms industry, in the cooking, heating, and ventilating apparatus industry, and in the machinery industry. The metal-working group as a whole employed 40 per cent more operatives and paid 56 per cent more wages in April than one year ago. The brass, copper, and aluminum industry, the cutlery, tools, and firearms industry, boat and ship building concerns, railway repair shops and manufacturers of railway equipment did an April business, as measured by wages paid, from 75 to 95 per cent greater than one year ago.

The furs, leather, and rubber goods group, although recording but slight improvement between March and April, employed 25 per cent more operatives and paid 47 per cent more in wages in April of this year than one year ago. The most favorable comparison with last year was shown by the boot and shoe industry.

The chemicals, oils, and paints group employed 6 per cent more operatives and paid 10 per cent more wages in April than in March. The most striking improvement was shown by the drug and chemical industry and by oil refineries and allied industries. The group as a whole did an April business nearly a third greater than in 1915.

The paper-making industry improved between March and April and is now paying a fourth more in wages than last year. In the printing and paper goods group April business was about 1 per cent less than March business. However, the group is employing a twelfth more operatives and paying an eighth more in wages than last year.

The textiles group showed only slight improvement between March and April. The only striking increases were among knit goods concerns and manufacturers and finishers of miscellaneous textiles. The group as a whole, however, is employing a seventh more operatives and paying a third more wages than last year. The clothing, millinery, and laundering group employed 3 per cent more operatives and paid 4 per cent more in wages in April than in March. Less activity was shown by the women's clothing industry and millinery establishments. The group as a whole employed 10 per cent more operatives and paid 25 per cent more in wages in April of 1916 than in April of 1915.

The food, liquors, and tobacco group of industries, although showing no decided changes between March and April, employed 5 per cent more operatives and paid 14 per cent more in wages in April than last year.

New York City factories are enlarging the volume of their business less rapidly than establishments in the remainder of the State. In April the factories of the metropolis paid 22 per cent more in wages than in the corresponding month of last year, whereas up-State factory pay rolls showed an increase of 46 per cent.

SHORTER HOURS FOR MEN AS A PUBLIC WELFARE MEASURE.

The right of the State legislature to limit the hours of labor which may be exacted from any worker has been gradually established by a series of court decisions. The fourteenth amendment was supposed to give everyone the right to contract for as many hours of labor a day as he chose, and only step by step, as it could be shown that each measure was demanded by the public welfare, has it been possible to restrict that right in the interests of the community as a whole. The right to limit hours of work for children was early recognized; the community's interest in the physical and mental development of the next generation was admitted. Then the right to limit hours in dangerous occupations, as a safety measure, was reluctantly conceded. Limitation of hours of labor for women came next. This was fought long and bitterly and its final winning was largely due to the services of the Consumers' League, which, when a case involving the constitutionality of a 10-hour law for women came up, set itself to prove the actual harmfulness to the health and morals of women involved in long working hours and the consequent need of restricting women's hours of labor in the public interest. The brief upholding this thesis,¹ prepared by Miss Josephine Goldmark, with the advice and cooperation of Louis D. Brandeis, won the case and has since been used as a storehouse of information concerning the effects of fatigue upon women and through them upon the community.

Now the final step in the process of regulating hours has been taken, its constitutionality is before the courts, and the method of defense found successful in 1908 is again in use. In 1913 Oregon passed a law limiting the period of work in mills, factories, and manufacturing establishments to 10 hours a day. The peculiarity of the law is that it applies to all workers, not to women and children only. That is, it limits men's work sharply and does so on the declared ground that "the working of any person more than 10 hours in one day, in any mill, factory, or manufacturing establishment is injurious to the physical health and well-being of such person and tends to prevent him from acquiring that degree of intelligence that is necessary to make him a useful and desirable citizen of the State." The State soon had occasion to prosecute a violator of this law, whose subsequent conviction was affirmed by the Oregon Supreme Court. The case was then carried to the United States Supreme Court, where on April 10 last it was set for argument.

¹ Supreme Court of the United States, October term, 1907. *Curt Muller, plaintiff in error, v. The State of Oregon*. Brief for defendant in error. 113 pp. [1908.]

The brief presented by the defendant in error in the case ¹ was prepared by Miss Goldmark, under the direction of Mr. Brandeis until the latter was forced to withdraw from the case by his nomination to the Supreme Court, when his place was taken by Mr. Felix Frankfurter. Comparatively little space is devoted to whether the State has the right to regulate hours of labor, though decisions are quoted to show that such a right is recognized as constitutional when it is exercised in the interests of the public welfare. The main purpose of the brief, therefore, is to show that the Oregon law is in the public interest and that the State is justified in thinking that work for more than 10 hours a day is inconsistent with a man's "health and physical well-being and ability to promote the general welfare by his increasing usefulness as a healthy and intelligent citizen."

For this purpose the authors of the brief have brought together a mass of data showing what legislation limiting the working hours of men is already in force and the world's experience upon which this legislation is based. A brief summary of existing legislation is followed by eight chapters in which the evils of long, and the benefits of short, working hours are discussed from various aspects. The titles of the eight chapters are:

1. Menaces to national vitality.
2. The dangers of long hours.
3. Benefits of short hours.
4. Shorter hours the only protection.
5. Economic aspect of reducing hours.
6. Uniformity of restriction needed for justice to competing employers.
7. Progress of the shorter day.
8. Need of legislation; instances of excessive hours of labor.

The menaces to national vitality are the reported increase in the so-called degenerative diseases of the heart, blood vessels, and kidneys, in cancer, and in the apparently weakened power of resistance to such diseases in the middle-aged. The brief brings together some 50 pages of data, statements, and opinions to show that while the death rate of children and young people is being cut down the rate for those who have reached middle age is increasing unduly; that in this respect the tendency in the United States is contrary to that of European countries; that the difference is not improbably due to the greater stress and strain of life, especially of industrial life here; and

¹ Supreme Court of the United States, October term, 1915. No. 228. Franklin O. Bunting, plaintiff in error, v. The State of Oregon, defendant in error. In error to the Supreme Court of the State of Oregon. Brief for the defendant in error. Vol. I, pp. 1-470; Vol. II, pp. 471-984. This brief has been reprinted under the title of "The case for the shorter workday," and can be obtained from the National Consumers' League, 289 Fourth Avenue, New York City. Charge for postage only.

that working conditions, including under that term such factors as hours, environment, dusts, fumes or vapors produced by the work, and the like, by affecting the resistance to disease, have much to do with what appears to be a much increased mortality from preventable diseases.

The second chapter, which forms about two-fifths of the whole brief, is devoted to the ill effects of long hours on health, safety, and morals, with especial attention to the nature of fatigue and its relation to health. A great body of experience is cited to show that workers in the dangerous trades who are overfatigued are more susceptible to occupational diseases and to any deleterious influences connected with their work. But even more emphasis is placed on showing that not only in the dangerous trades but in all industries a permanent predisposition to disease and premature death exists in the common phenomenon of fatigue and exhaustion.

In ordinary factory work, where no special occupational diseases threaten, fatigue in itself constitutes the most imminent danger to the health of the workers because, if unrepaired, it undermines vitality and thus lays the foundations for many diseases.

Special attention is given to the health hazards peculiar to modern industry, such as speed and monotony, and the effect of bad air, humidity, extremes of temperature and the like, as well as special occupational risks. The danger of injury from any or all of these causes, it is contended, is greatly increased when the worker is fatigued. Evidence is given to show the reciprocal action of these two sets of influences. The general incidents of factory life just mentioned increase the tendency to fatigue, while fatigue, reducing the worker's power of resistance, renders these accompaniments of his work more harmful. Long hours naturally intensify the evil.

Declaring that fatigue is a chemical process, and that an over-tired person is literally a person poisoned by his own waste products, the brief suggests the absolute necessity of limiting the length of working hours in order that the dangers to health as a result of work performed after fatigue has set in may not be correspondingly increased and that the individual worker may maintain himself in a state of full efficiency by virtue of the fact that fatigue developed on one day is completely repaired before the next:

The daily supply of energy required for daily labor must be gained by sufficiently long periods of rest and economical use of strength, and must not exceed the expenditure of energy required by the accelerated pace of industry.

Additional reasons for limiting hours are found in the increased danger of accidents arising from the varying effects of fatigue, and in the general loss of moral restraint and the increase of intemperance due to the same cause. In support of these contentions the experience of foreign countries is offered in exhaustive detail.

Fatigue affects the family life and the community, says the brief:

The loss of moral restraints and intellectual ambition on the part of workers exhausted by excessive labor is a social loss. Family life, essential for the welfare of the Nation, is destroyed. After overlong hours, the workers scarcely see their young children, and have neither leisure nor energy after working hours to share the family interests. * * * The deterioration of any large portion of the population inevitably lowers the entire community, physically, mentally, and morally.

Turning from the evils of long hours, the authors of the brief try to impress upon the court the physical and moral benefits and the good effect on the general welfare produced by short hours. Fortified by experience in this and other countries, the brief asserts that the good effect of short hours is reflected in the growth of temperance, an improvement in the general standards of living, with consequent benefit to society, and a greater inclination on the part of the workers, because of increased periods of leisure, to take advantage of opportunities for self-improvement and legitimate enjoyment. Emphasis is laid upon the fact that the welfare and safety of democracy rest upon the character and intelligence of its citizens, that for the development of morals and intelligence, leisure is needed, and that it is therefore in the interest of the State to limit industrial labor so that the worker shall not be too much exhausted to make use of that leisure which should be provided outside of working hours.

It is pointed out that the foreign born who come to this country must be Americanized; that is, given opportunity for acquiring the ability to speak the English language and to become acquainted with American institutions.

Ignorance of the English language is the greatest obstacle to industrial advancement. It prevents the distribution of congested immigrant populations. It increases the dangers of industrial accidents, injuries, and occupational diseases, owing to the immigrants' inability to understand orders or hygienic regulations printed or orally given in industrial establishments. * * * This whole program of Americanization is impossible unless sufficient leisure is provided after working hours to enable the workers to take advantage of the opportunities offered. The task of teaching adult foreigners a new language is rendered almost hopeless unless they can come to be taught with some freshness of mind. The project of Americanization is defeated when working hours are so long that no evening leisure is left or the immigrant workers are too much exhausted to make use of it.

The policy of shorter hours is believed to be the only protection to the worker, because "industries not intrinsically dangerous and conducted under good sanitary conditions may become harmful through sheer lengthening of the working hours. Even the lightest work becomes totally exhausting when carried on for excessive length of time," and a decrease of the intensity of exertion in industry is not believed to be feasible. The universal experience of those manufacturing countries which have longest had the short working day seems to indicate that commercial prosperity is not hampered by the

curtailment of hours, but, on the contrary, the increased efficiency of the workers due to shorter working hours, together with general improvement of industrial communities in physique and morals, reacts favorably upon output. In support of this position, an abundance of testimony, covering experience in the United States, Great Britain, Germany, France, Switzerland, and Belgium, is offered tending to show that shorter hours heighten efficiency, which springs from improved physical health and energy, together with a change of attitude toward work and employers. The curtailment of hours, it is asserted, has also acted as a stimulus to heightened efficiency on the part of employers, leading them to lessen or eliminate "lost time" by securing a steadier flow of work and materials through the factory.

To refute the impression held by some that the short working day has tended to increase the cost of production, two facts are stated: First, the labor cost is only one item, and often a small item, in the total cost of manufacture; and, second, heightened efficiency of both employers and workers under shorter hours stimulates output and thus tends to equalize or even decrease the total costs. One instance may be cited:

In 1894 the hours of labor of about 43,000 workpeople were reduced to an average of 48 hours per week. * * * It is stated * * * that it is clear that no extra cost has been incurred by the public on account of the reduction of hours, nor has the output of work been diminished. On the other hand, the majority of workmen being on piecework, the average weekly earnings per man have not been sensibly altered, although piecework prices have not been increased. The dayworkers received an increased hourly rate of pay to make their earnings per week of 48 hours equal to those per week of 54 hours. It was not found necessary to increase the number of dayworkers.¹

Short hours bear a definite and favorable relation to wages, according to the evidence included in the brief, which tends to show that wages in industries in which the short workday has been established are almost universally higher than they are in wholly unregulated trades. "Moreover, even when the shorter day has resulted in a slight temporary decrease in wages, the majority of workers have willingly suffered the reduction, in order to gain the increased health and leisure consequent upon shorter hours of labor."

Regularity of employment is stated to be another benefit derived from shorter hours, for "in place of alternating periods of intense overwork and periods of idleness, employers have found it possible to distribute work more evenly throughout the year." Considerable statistical evidence is presented showing that in certain important manufacturing industries a trend toward shorter hours of labor is manifest, and the spread of the tendency to reduce hours in the

¹ Great Britain, Board of Trade Labor Gazette, July, 1905, p. 196.

United States during 1915 is indicated by definite reference to many establishments which have inaugurated the eight-hour day.

The need for further legislation along this line is strongly urged in a chapter enumerating instances of excessive hours of labor. "Since collective bargaining has proved ineffectual in checking these abuses, the need of legislation to limit such excessive hours of labor is unmistakable."

There has already been a great deal of legislation regulating hours of labor for men. The brief contains a reference list showing that the length of the working day, as regulated by law in certain private businesses, railroads, street railways, work done in private business for national, State, and municipal governments, and public employment, is as follows:

Eight-hour day.

Blast furnaces: Arizona, 1913; Colorado, 1913.

Coke ovens: Alaska, 1913; Arizona, 1913; Colorado, 1913.

Electric light and power plants: Arizona, 1913.

Compressed air, work in: New Jersey, 1914; New York, 1909.

Irrigation works: Montana, 1907.

Miners: Alaska, 1913; Arizona, 1912; California, 1913; Colorado, 1905; Idaho, 1909; Missouri, 1909; Montana, 1889; Nevada, 1912; Oklahoma, 1910; Oregon, 1910; Pennsylvania, 1911; Utah, 1907; Washington, 1910; Wyoming, 1910.

Plaster and cement mills: Nevada, 1912; Arizona, 1913 (cement mills only).

Plate glass works: Missouri, 1909.

Public employment and work done in private business for national, State, or municipal governments: Alaska, 1913; Arizona, 1910; California, 1902, 1906; Colorado, 1908; Connecticut,¹ 1911; District of Columbia, 1892; Hawaii, 1905; Idaho, 1889, 1911; Indiana, 1894; Kansas, 1909; Kentucky, 1910; Maryland, 1888 (applies only to Baltimore); Massachusetts, 1909; Minnesota, 1905; Missouri, 1913 (applies only to cities of the second class); Montana, 1889; Nevada, 1912; New Jersey, 1911; New Mexico, 1910; New York, 1909; Ohio, 1912; Oklahoma, 1907; Oregon, 1910, 1913; Pennsylvania, 1897; Porto Rico, 1911; Texas, 1913; United States, 1892; Utah, 1895; Washington, 1910; West Virginia, 1899; Wisconsin, 1911; Wyoming, 1889, 1913.

Railroads:² Arkansas, 1907; Connecticut, 1909; Maryland, 1911; Nevada, 1913; New York, 1909; Texas, 1911; West Virginia, 1907; Wisconsin, 1911.

Rolling mills, rod mills, stamp mills: Alaska, 1913; Arizona, 1913; Colorado, 1913; Idaho, 1909; Wyoming, 1910.

Smelters, reduction works, etc.: Alaska, 1913; Arizona, 1912; California, 1913; Colorado, 1913; Idaho, 1909; Missouri, 1909; Montana, 1889; Utah, 1907; Wyoming, 1910.

Tunnels: Arizona, 1913; California, 1913; Montana, 1907.

Nine-hour day.

Railroads:² Missouri, 1913; Nebraska, 1913; North Carolina, 1913; Oregon, 1911; United States and District of Columbia, 1906-7.

Street railways: Massachusetts, 1912.

Telephone operators: Montana, 1909.

¹ Public employment only.

² Legislation applies to telegraph and telephone operators, dispatchers, signal men, etc., but not to train crews.

Ten-hour day.

Bakeries: New Jersey, 1912.

Brickyards, New York, 1909.

Cotton and woolen mills: Georgia, 1910; Maryland, 1911.¹

Drug stores: California, 1907; New York, 1909.

Manufacturing establishments: Mississippi, 1912.

Mines: Maryland, 1888 (Allegany and Garrett Counties only).

Railroads²: Michigan, 1897; New York, 1909.

Saw and planing mills: Arkansas, 1905.

Street railways: Louisiana, 1886; Michigan, 1897; New York, 1909; Rhode Island, 1909; Washington, 1910.

Eleven-hour day.

Factories: North Carolina, 1915.

Grocery stores: New York, 1915.

Twelve-hour day.

Street railways: California, 1906; Maryland, 1898; New Jersey, 1910; Pennsylvania, 1894; South Carolina, 1912.

WAGES AND HOURS OF LABOR OF EMPLOYEES OF PUBLIC UTILITY COMPANIES, NEW YORK.

A memorandum, under date of April 1, 1916,³ addressed by the National Consumers' League to the joint legislative committee investigating the New York public service commissions, on the need of legislation empowering the commissions to regulate the hours of work and wages of employees of public utility companies, maintains that "it is to the interest of the whole community that the workers in all public utilities shall be justly compensated for their labor," or in other words, that "labor should share fairly in the profits that are a result of its toil." At the outset the attention of the committee is called to a number of examples of alleged unfair conditions of labor, involving hours and wages, permitted by New York public service companies which operate under franchises and by contractors who are building improvements for the State and municipality. Responsible investigations, declares the memorandum, have shown that hundreds of laborers working on the city's system of subways have been, within the past six months, receiving \$1.50 to \$1.60 a day; that girls employed 8 to 12 hours as ticket sellers in certain elevated railway stations were receiving \$7.20 and \$8.64 a week, until a few months ago when the wages were raised to \$8.16 and \$10.60 a week; that women employed 12 hours a day as news girls at subways stations were receiving in January, 1914, as low as \$7 a week. Such conditions, it is urged, are against the public welfare.

¹ Except in contracts for work by hour.

² Train crews.

³ Memorandum addressed to the joint legislative committee investigating the New York public service commissions. National Consumers' League, 289 Fourth Avenue, New York City, April 1, 1916. 47 pp.

Reference is made to the action of the commission in ordering a reduction in telephone rates and in the price of electric current in New York City, which actions were taken after exhaustive investigations during which it is asserted no consideration was given to hours of work or wages. What the memorandum asks is that the commission should give the conditions of labor under franchise companies as thorough consideration as it gives to examining all the charges included under operating expenses. The telephone company itself has recognized the justice of this contention, for in its annual report for 1915 it stated that—

Where earnings are controlled, where surplus operating revenue after a reasonable return on capital goes back to the public in reduction of charges, in construction of plants for which no capital securities are issued, in improvements in quality or quantity of service, wages also should be controlled.

In view of these facts the need of a labor clause is urged in the following words:

We submit that before taking action of such far-reaching importance as the reduction of rates, it should be made by statute the duty of public service commissions to gather all possible information as to existing wage schedules and hours of work, to give an opportunity for full public discussion, and in its final decision to take cognizance of these two items as equal in importance to the other recognized charges. It is, therefore, urgent that commissions' powers should be broad enough to allow them to make such regulations.

Three general principles are argued. In the first place it is maintained that since the work performed by public utilities is of a public character which the State itself could do, the State has the right to regulate the wages and hours of work of employees of public utility companies. In support of this the decision of the United States Supreme Court in the employers' liability cases, upholding the constitutionality of the regulation of the rights between the employer and the employees, is cited. The court said:

It is difficult to conceive how legislation may effectively control the business if it can not regulate the conduct of those engaged in the business, while engaged in the business, in every act which is performed in the conduct of the business. * * * It would seem, therefore, that when persons are employed in interstate or foreign commerce, its terms and conditions and the rights and duties which grow out of it are under the control of Congress subject only to the limits on the exercise of that control prescribed by the Constitution.

Also in *Atkin v. Kansas* (191 U. S., 207) the court said:

It belongs to the State, as guardian and trustee for its people and having control of its affairs, to prescribe the conditions upon which it will permit public work to be done in its behalf, or on behalf of its municipalities.

It is pointed out that while public utilities are private property, they serve the community and have special privileges from the com-

munity and are therefore affected by a general interest which brings them likewise under State control.

The memorandum declares that the State should authorize public service commissions in regulating rates to fix the hours of work and wages of employees. It is pointed out that these commissions now have power to require of franchise companies "safe and adequate service and just and reasonable charges." These are guaranteed to the consumer, and capital is guaranteed a fair return on its investments, but "labor is only theoretically protected." The presumption appears to be that by allowing the companies themselves to determine rates of pay and hours of work, and to include them in the cost of operating expenses, the employees are sufficiently provided for. But "this assumes that the employer realizes his interest in insuring a fair return to the employee and in maintaining him in health and working efficiency, or it assumes the ability of the employees themselves to enforce recognition of their needs. Either presumption is without sound basis of fact." It is believed that regulation should specifically protect the workers' interests. "A decent living wage to employees of a public utility company should be the *sine qua non* of the operation of such utility; and regulation which ignores that factor is incomplete and unsatisfactory."

The third argument suggested is that the courts have recognized the right of the State to protect employees in public or quasi public employments for the good of the service itself, in the interest of safety and for the general welfare of the employees. In *People v. Erie R. R.* (198 N. Y., 369) the eight-hour law was upheld specifically for the reason that long hours of work might result in accidents. The court said:

It is not at all inconceivable that such an employee [in control of dangerous agencies] subjected to too long hours of duty and confinement might become physically fatigued and mentally inert and make mistakes which would lead to the destruction of life. This being so it was permissible for the legislature to pass a statute limiting the hours of labor, and it can not be said that there is no reason or argument to support its judgment that eight hours was a proper limit.

The same principle was affirmed by the United States Supreme Court in the case of the *Baltimore & Ohio R. R. v. Interstate Commerce Commission*, 1911 (221 U. S., 612; 31 S. C. R., 621). The court said in part:

Congress was not limited to the enactment of laws relating to mechanical appliances, but it was also competent to consider, and to endeavor to reduce, the dangers incident to the strain of excessive hours of duty on the part of engineers, conductors, train dispatchers, telegraphers, and the persons embraced within the class defined by the act.

Regulation for the good of the service without regard for safety, and regulation of working conditions in the interest of the employees without reference to the quality of service supplied have also been recognized. The statute itself includes at least one specific requirement based on the right of the State to safeguard the interests of employees of franchise companies, for it provides that payment of wages by "steam surface railroads" shall be semimonthly. It thus recognizes the inability of the employees to secure this right for themselves without its aid. This provision has been held constitutional.

Believing that it has established the fact that there is a growing tendency to justify regulation of working conditions in public utility companies as a matter of direct public concern, the memorandum concludes:

We therefore submit that under the rules and analogies laid down by the court, the State assuredly has the power in regulating public utility companies to establish methods of fixing wages for employees and the hours of their employment; and the power should be exercised by the State legislature. The end is legitimate. The means suggested are appropriate to correct an evil which has had in the past a very direct effect upon the ability of public utility companies to perform their duties to the State and to the public, and the means are plainly adopted to that end. On reason and authority, therefore, such legislation is within the constitutional power of the State and should be enacted.

In a chapter on regulation of labor, presenting an analysis of the power to protect employees of franchise companies at present conferred upon the commissions by statutory law, it is pointed out that authority is specifically given to "provide security" and "protect those employed in the manufacture," but it has not been interpreted, in the past, as broad enough to include the regulation of hours of work and rates of pay as essential parts of such protection. By amending the law to include these two considerations it is not thought that any conflict with other laws, such as the labor law, will result, but that it will merely enable the commissions to supplement them.

As to suggested wage determinations by the public service commissions for various classes of employees, attention is called to the fact that in all direct employments by the city, State, or municipality, and in all public improvements carried out by contractors, it has long been the custom to establish standard rates of pay by (1) classifying the employees and securing direct appropriation from the legislature for various grades of service; (2) by prescribing a legal minimum in the statute itself; (3) by fixing rates that shall "not be less than the prevailing rate for a day's work in the same trade or occupation in the locality within the State where such public work on, about, or in connection with which such labor is performed in its final or completed form is to be situated, erected, or used." In

discussing the third method the chief difficulty suggested is that payment of the "prevailing rate" has resulted in the lowest wages which workmen, underbidding each other in a period of serious unemployment, would accept. At present the only appeal for higher wages that can be made by laborers under this provision is to the State commissioner of labor, who has found great difficulty in enforcing the law. Furthermore, it has been held that the action of the commissioner of labor is not final or conclusive. To overcome these difficulties the memorandum suggests the desirability of amending the law so as to make mandatory the advertisement of minimum rates of pay in the specification of all construction work.

Whatever methods are used for determining minimum wages, public policy demands that they must be sufficient not only for the bare essentials of living, but for * * * "the normal needs of the average employee regarded as a human being living in a civilized community."

Many public franchise companies are known to earn large profits in the public service. Under the theory that a just division of profits should entitle all three interests involved—capital, consumer, and labor—to share the earnings, it is fair that labor should have some proportional benefit. Therefore capital should not be allowed higher returns, nor consumer be given lower rates by the commission, without its guaranteeing at the same time an increase in the wages paid to employees.

Twelve pages of the memorandum are devoted to suggested amendments to the public service commissions law.

WAGES AND HOURS OF LABOR IN THE MEN'S CLOTHING INDUSTRY, 1911 TO 1914.

The Bureau of Labor Statistics has recently issued, as Bulletin No. 187, a report on wages and hours of labor in the manufacture of men's ready-made clothing. Full-time weekly earnings of employees in this industry in 1914 were 1 per cent lower than in 1913, 8 per cent higher than in 1912, and 10 per cent higher than in 1911. The reduction in weekly earnings in 1914 as compared with 1913 was caused by a reduction in the regular working hours per week, which in 1914 were 1 per cent lower than in 1913, 6 per cent lower than in 1912, and 7 per cent lower than in 1911. The average rates of wages per hour in 1914 were the same as in 1913, 14 per cent higher than in 1912, and 16 per cent higher than in 1911. The report is based on returns from 277 shops, operated by 153 establishments, and covers nearly 25,000 employees.

The average full-time weekly earnings in the principal occupations in 1914 were as follows:

Basters, coat, male.....	\$13.33
Basters, coat, female.....	9.67
Busshelers and tailors, male.....	14.56
Cutters, cloth, hand, male.....	21.66
Examiners, male.....	16.18
Fitters or trimmers, coat, male.....	17.13
Hand sewers, coat, male.....	14.04
Hand sewers, coat, female.....	9.14
Hand sewers, pants, female.....	7.77
Operators, coat, male.....	16.61
Operators, coat, female.....	11.00
Operators, pants, male.....	15.37
Operators, pants, female.....	10.57
Pressers, coat, male.....	14.99
Pressers, pants, male.....	15.08

The regular full-time hours per week in 1914 ranged in the different shops from 44 to 60, the average for most of the occupations being between 51 and 53. The average hours of cutters were approximately 48½ per week.

The busiest months in the industry in the year ending with June, 1914, were July in the summer season and December and January in the winter season. The slackest months of the year were October and April. The principal cities producing men's factory-made clothing are, in order, New York, Chicago, Baltimore, Philadelphia, Rochester, Cincinnati, and Boston.

STRIKES AND LOCKOUTS, NOVEMBER, 1915, TO APRIL, 1916.

According to data compiled from various sources by the United States Bureau of Labor Statistics, the number of strikes and lockouts during the six months, November, 1915, to April, 1916, inclusive, was 1,069.

The following table, which has been corrected for months previous to April, 1916, as reports have come in during the latter month, shows the number of strikes and lockouts begun in each of the months of November, 1915, to April, 1916, inclusive, together with 76 strikes and lockouts reported as having occurred during the period, although the month in which they began was not reported. The strikes and lockouts were distributed as follows:

NUMBER OF STRIKES AND LOCKOUTS BEGINNING IN EACH MONTH, NOVEMBER, 1915, TO APRIL, 1916, INCLUSIVE.

Kind of dispute.	Novem- ber.	Decem- ber.	Janu- ary.	Febru- ary.	March.	April. ¹	Month not stated.	Total.
Strikes.....	102	70	150	156	208	262	71	1,019
Lockouts.....	10	8	8	5	8	6	5	50
Total.....	112	78	158	161	216	268	76	1,069

¹ This column includes disputes that began in the month of April only. During this month 69 other disputes were reported, which either began in preceding months or the date of beginning was not given; the former have been distributed in the preceding columns, the latter added in the column entitled "month not stated."

More detailed accounts of the disputes reported for each month from November, 1915, to March, 1916, may be found in the numbers of the Review relating to those months.

DISPUTES REPORTED DURING APRIL, 1916.

The number of strikes reported during the month of April is exceptionally large. This seems to have been due to the great demand for labor by establishments engaged in filling war orders, resulting in a temporary shortage in all related occupations, which manufacturers have not been able to prevent because of the great decrease in immigration. This demand for labor has been accompanied by demands of working people for increased wages, the rapid and repeated granting of which during the past six months has resulted in new demands of laboring men that many employers deem excessive and are refusing to grant. The largest number of strikes were in the metal industries, strikes of machinists occurring in California, Colorado, Minnesota, Missouri, Ohio, West Virginia, Pennsylvania, New Jersey, New York, Connecticut, and Massachusetts; and strikes of molders, blacksmiths, and boiler workers in nearly all the eastern States mentioned above. Miners' strikes were confined mainly to Ohio, Pennsylvania, and West Virginia. Several strikes of seamen occurred at the ports along the Atlantic seaboard.

Large strikes which attracted especial attention were those at the plants of the International Harvester Co., at Chicago, one of shovclers in Springfield and Holyoke, Mass., the subway strike in New York City, the strike at the Westinghouse plants in Pittsburgh and vicinity, and the strike at the cable works in Hastings, N. Y.

The data in the tables which follow relate to 337 strikes and lockouts concerning which information was received by the bureau during the month of April. These include, in addition to the 262 strikes and 6 lockouts that began in April, 67 strikes and 2 lockouts which were reported during the month, but began as follows: 28 strikes and 1 lockout in March, 8 strikes and 1 lockout in February, 3 strikes in

January, and 28 strikes the dates of commencement of which were not reported, but most of which probably occurred in March or April. Inasmuch as strikes which start toward the end of a month frequently do not come to the attention of the bureau until after the report for the month has been prepared, it is probable that corrected figures for April will show a material increase over the number of strikes herein reported for that month.

Of the disputes reported during April, 10 strikes and 1 lockout occurred east of the Mississippi and south of the Ohio and Potomac, 24 west of the Mississippi, and the remaining 362 strikes and 7 lockouts in the territory north of the Ohio and Potomac and east of the Mississippi. More than one-half of these strikes occurred in the first four States shown in the following table:

STATES IN WHICH FIVE OR MORE STRIKES AND LOCKOUTS WERE REPORTED
DURING APRIL, 1916.

[This and the following tables include all the disputes (337) reported in April. Of these 268, as shown in the preceding table, began in April, while 69 either began in other months or the date of beginning was not reported.]

State.	Strikes.	Lockouts.	Total.
New York.....	62	.....	62
Massachusetts.....	53	.....	53
Pennsylvania.....	46	1	47
Ohio.....	41	5	46
New Jersey.....	37	.....	37
Illinois.....	11	1	12
Connecticut.....	11	.....	11
Michigan.....	7	.....	7
Rhode Island.....	6	.....	6
West Virginia.....	6	.....	6
Maryland.....	5	.....	5
Missouri.....	5	.....	5
22 other States.....	39	1	40
Total.....	329	8	337

Five of these strikes were confined to women and 12 included both men and women. No lockouts were reported in which women were concerned. In 33 strikes and 1 lockout the sex was not stated.

The industries in which four or more strikes and lockouts were reported were as follows:

NUMBER OF STRIKES AND LOCKOUTS IN SPECIFIED INDUSTRIES REPORTED DURING
APRIL, 1916.

Industry.	Strikes.	Lock-outs.	Total.
Metal trades.....	64	1	65
Building trades.....	36	2	38
Textile workers.....	37	.....	37
Seamen.....	18	.....	18
Railroads.....	16	1	17
Clothing industries.....	14	.....	14
Iron and steel mills.....	14	.....	14
Mining.....	14	.....	14
Longshoremen and freight handlers.....	11	.....	11
Chemical workers.....	9	.....	9
Glassworkers.....	7	.....	7
Rubber workers.....	6	1	7
Baking industry.....	5	.....	5
Granite cutters.....	5	.....	5
Lumber workers.....	5	.....	5
Paper mills.....	5	.....	5
Street railways.....	4	1	5
All others.....	59	2	61
Total.....	329	8	337

Included in the above are 32 strikes and 1 lockout of machinists, 12 strikes of molders, 13 strikes of weavers, 13 of coal miners, 10 of railroad section hands, 12 of painters, and 5 of carpenters.

In 150 strikes and 5 lockouts the employees were connected with unions; in 27 strikes and 1 lockout they were not connected with unions; and in 4 strikes they were not connected with unions at the time of striking but organized themselves into unions as a result of the strike; in the remaining strikes and lockouts it was not stated whether the strikers had union affiliations or not.

In 286 cases the causes of the strikes and lockouts were given. In 80 per cent of these the question of wages or hours or both was the leading issue. The principal causes are shown in the following table:

PRINCIPAL CAUSES OF STRIKES AND LOCKOUTS REPORTED DURING APRIL, 1916.

Cause.	Strikes.	Lock-outs.	Total.
For increase of wages.....	154	1	155
For decrease of hours.....	9	.....	9
For increase of wages and decrease of hours.....	38	2	40
Against increase of hours and reduction of wages.....	1	.....	1
For increase of hours.....	1	.....	1
General conditions.....	7	.....	7
Conditions and wages.....	4	.....	4
Conditions, wages, and hours.....	1	.....	1
Recognition and closed shop.....	15	.....	15
Recognition and wages.....	12	.....	12
Recognition and hours.....	2	.....	2
Recognition, wages, and hours.....	5	.....	5
Discharge of employees.....	4	3	7
Because nonunion men were employed.....	7	1	8
In regard to the agreement.....	6	.....	6
Jurisdictional.....	2	.....	2
Miscellaneous.....	10	1	11
Not reported.....	51	.....	51
Total.....	329	8	337

In 164 of the strikes the number of persons involved was reported to be 148,137, an average of 903 per strike. In 20 strikes, in each of which the number involved was over 1,000, the strikes numbered 114,953 persons, thus leaving 31,384 involved in the remaining 144 strikes, or an average of 218 to each. In 3 lockouts the number of employees involved was reported as 1,595, or an average of 532 in each.

In 259 strikes and 7 lockouts only 1 employer was concerned in each disturbance; in 22 strikes the disturbance concerned more than 1 employer; and in 48 strikes and 1 lockout the number of employers was not stated.

Of 130 strikes reported as ending in April, 34 were won, 16 lost, 75 compromised, while in 5 the strikers returned to work under promise of the employer to arbitrate the matters in dispute. The duration of 70 of these strikes was given as follows: One week or less, 44; 1 to 2 weeks, 6; 2 to 3 weeks, 6; 3 to 4 weeks, 5; 5 to 10 weeks, 6; 3 months, 1; 4 months, 1; 2 years, 1. Omitting the last 3 mentioned, the duration of the remaining 67 strikes was 730 days, or an average of 11 days each.

ANTHRACITE COAL WAGE AGREEMENT OF 1916.

The anthracite coal wage agreement, as arranged by the joint conference committee in New York City on April 30, was ratified by the miners' convention of the three anthracite districts in Pottsville, Pa., on May 4 and signed in Philadelphia on May 5. Like the 1912 agreement this contract will be in effect for four years. Under its provisions the eight-hour day is established; contract miners and others receive an advance in wages of 7 per cent, while the nine-hour wage of day men who will now work eight hours is advanced 3 per cent, which means an advance of about 15.5 per cent on such labor. The following is the agreement in full:

This agreement, made this 5th day of May, 1916, between districts 1, 7, and 9, representing the anthracite mine workers' organization, parties of the first part, and the anthracite operators, parties of the second part, covering wages and conditions of employment in the anthracite region of Pennsylvania, witnesseth:

The terms and provisions of the award of the Anthracite Coal Strike Commission, and any subsequent agreement made in modification thereof and supplemental thereto, are hereby continued for a further period of four years ending March 31, 1920, except in the following particulars, to wit:

First. (a) The contract rates at each colliery shall be increased seven (7) per cent over and above the contract rates at each colliery; effective in April, 1912, as established by the agreement of May 20, 1912.

(b) The working day established by the Anthracite Coal Strike Commission shall be changed from nine (9) hours to eight (8) hours. All employees paid by the day or hour and coming within the classification of company men, except as hereinafter more specifically provided, shall be paid for a day of eight (8) hours, the rate established under the agreement of May 20, 1912, for a day of nine (9) hours, subject to an increase of three (3) per cent.

(c) All company men working on the basis of an eight-hour day prior to April 1, 1916, shall receive an increase of seven (7) per cent over and above the daily or hourly rates established for their respective occupations by the agreement of May 20, 1912, except that hoisting engineers who were granted an eight-hour day in March, 1912, shall receive an increase of three (3) per cent over and above the rates established by the agreement of May 20, 1912; it being understood, however, that where three full shifts were substituted for two shifts in March, 1912, the rate of the three hoisting engineers shall be the same and the shifts shall alternate in the manner customary where continuous employment is required.

(d) All hoisting engineers working on a nine-hour basis prior to April 1, 1916, and whose duties require that they should continue to work nine (9) hours per day, shall receive an increase of seven (7) per cent over and above the nine-hour rate established by the agreement of May 20, 1912.

(e) All company men working on a daily basis in excess of nine (9) hours per day on a monthly basis prior to April 1, 1916, shall continue to work on said basis and their wage, whether paid hourly, daily, or monthly, shall be increased seven (7) per cent over and above the rates established for their respective occupations by the agreement of May 20, 1912.

MACHINE MINING.

Second. Conditions having arisen in portions of the anthracite region necessitating the use of mining machines, the right of the operator to use such machines shall be unquestioned and the method employed shall be at the option of the operator. Where work is done by mining machines the following shall govern as the basis of payment to the several classes of labor employed in the undercutting, mining, and loading of coal.

(a) When machine mining is done on a day basis the rates paid shall not be less than the established colliery machine rates paid to the several classes of labor employed April 1, 1916; provided, that in no case shall the rate for machine miner be less than \$3.30 per day; for machine runner, \$2.70 per day; for machine miner's laborer, \$2.34 per day; and for machine runner's helper, \$2.34 per day. It being understood that these rates are agreed to as covering a new require-

ment and are applicable only to machine mining, subject, nevertheless, to three (3) per cent advance under the terms of this agreement.

(b) Where machine mining contracts cover the mining of a vein or section of a vein not heretofore mined, the contract rates shall be such as to enable the men employed in mining work to earn, on the average of all employed in each occupation, a daily wage not less than the rate established for said occupation in paragraph (a). Where mining machines replace contract miners cutting coal from the solid, the average daily earnings of the contract machine miners shall not be less than the average normal earnings of such contract miners in the territory where the mining machines are introduced and where the same vein conditions exist; provided, that where the average normal earnings of the contract miners are shown to be less than the day rate established in paragraph (a) the machine contract rates shall be so adjusted as to enable the machine miner, on average, to earn a daily wage of not less than the day rate established in paragraph (a).

(c) The operator shall be assured of the full cooperation of the machine miner in the development and maintenance of efficient operation, and the day's earnings shall be based on a work day of eight (8) hours at the face as now provided in section 3 hereof.

EIGHT-HOUR DAY.

Third. An eight-hour day means eight (8) hours of actual work for all classes of labor, at the usual working place, exclusive of noon-time, for six (6) days per week, if the operator desires to work his mines to that extent, excepting only legal holidays. The time required in going to and coming from the place of employment in or about the mine shall not include any part of the day's labor. Drivers shall take their mules from the stables to the usual working place before starting time and shall return them to the stables after quitting time, compensation for such service being included in the day rates established for this class of labor. If, because of breakdowns, repairs, or the requirements of transportation, or other causes essential to efficient operation, it is found necessary to extend the normal workday of any employee, or any class of employees, the operator may do so at his option, paying for overtime a proportional rate per hour as determined from the rates established under section 1 hereof.

Fourth. All grievances referred to the board of conciliation shall be heard and a decision rendered within 60 days from the date of reference to the board; provided that said period may be extended for such time as may be mutually agreed upon by the operators' representative and the mine workers' representative in the district in which said grievance originates. If no decision is reached within 60 days after reference, or within the extension period thereafter, the board

shall submit the case forthwith to the umpire for final decision as provided in the award of the Anthracite Coal Strike Commission.

Fifth. The present prices of powder and miners' supplies, as established at the several collieries in the region, shall be continued without change throughout the term of this agreement.

Sixth. Under paragraph (d) of the agreement of May 20, 1912, the duty of the grievance committee shall be confined solely to the adjustment of disputes in cases where the foreman and employee have been unable to agree, and in the discharge of this duty they shall strictly comply with the provisions of said paragraph.

Under paragraph (f) of the agreement of May 20, 1912, the grievance committee is given the sole authority of joining with the company officials in recording the rates existent April 1, 1902, as well as the rates established under the agreement of May 20, 1912.

Seventh. The board of conciliation is empowered to hear complaints relating to day rates appearing on colliery rate sheets as effective April 1, 1912, but which may be claimed to be obsolete of that date on account of being supplanted by other rates. The board of conciliation may at its discretion, in case the rates are shown to have been manifestly obsolete, order such rates erased.

Ninth. Neither party to this agreement shall initiate or encourage legislation that would in any manner affect the obligations of this contract or impair any of its provisions.

On behalf of the anthracite operators:

W. L. CONNELL.
S. D. WARRINGER.
W. J. RICHARDS.
MORRIS WILLIAMS.

On behalf of the anthracite mine workers' organization:

JOHN T. DEMPSEY,
President District No. 1.
THOMAS KENNEDY,
President District No. 7.
JAMES MATTHEWS,
President District No. 9.
JOHN P. WHITE,
President of United Mine Workers of America, Representing Anthracite Mine Workers' Organization.

Attest:

ALVAN MARKLE,
Chairman.
JAMES A. GORMAN,
Secretary.

RETAIL PRICES OF FOOD IN THE UNITED STATES IN
FEBRUARY AND MARCH.

Returns to the Bureau of Labor Statistics from representative retail dealers in the United States covering the prices of the principal staple articles of food show that as a whole the retail price of food increased approximately 1 per cent between February 15, 1916, and March 15, 1916. The first table presented below shows the average retail price of each of the several articles of food covered by the inquiry on February 15 and March 15, 1916, together with relative retail prices, which indicate the per cent the average prices in each month were of the average prices for the year 1915. All meats showed an increase in the month, the greatest increase being in pork chops; sugar showed a marked increase. The only articles showing a decrease in the month were eggs, milk, flour, and potatoes. Seven articles showed no change in the average price on the two dates compared.

AVERAGE MONEY RETAIL PRICES AND RELATIVE RETAIL PRICES OF FOOD ON
FEB. 15 AND MAR. 15, 1916.

[The relative price shows the per cent that the average price on the 15th of each month was of the average price for the year 1915.]

Article.	Unit.	Average money price—		Relative price (average price for the year 1915=100)—	
		Feb. 15, 1916.	Mar. 15, 1916.	Feb. 15, 1916.	Mar. 15, 1916.
Sirloin steak.....	Pound.....	\$0. 255	\$0. 263	100	103
Round steak.....	do.....	. 226	. 233	99	102
Rib roast.....	do.....	. 200	. 204	100	102
Chuck roast.....	do.....	. 159	. 164	99	102
Plate boiling beef.....	do.....	. 122	. 124	100	102
Pork chops.....	do.....	. 195	. 219	96	108
Bacon, smoked.....	do.....	. 276	. 281	101	103
Ham, smoked.....	do.....	. 271	. 276	105	107
Lard, pure.....	do.....	. 148	. 152	100	103
Hens.....	do.....	. 223	. 229	107	110
Salmon, canned.....	do.....	. 200	. 202	100	101
Eggs, strictly fresh.....	Dozen.....	. 342	. 281	102	84
Butter, creamery.....	Pound.....	. 382	. 407	106	113
Cheese.....	do.....	. 247	. 249	107	108
Milk, fresh.....	Quart.....	. 091	. 090	101	100
Flour, wheat.....	½-barrel bag.....	. 993	. 953	99	95
Corn meal.....	Pound.....	. 031	. 031	99	99
Rice.....	do.....	. 091	. 091	100	100
Potatoes.....	Peck.....	. 362	. 360	158	157
Onions.....	Pound.....	. 044	. 045	127	128
Beans, navy.....	do.....	. 092	. 092	119	119
Prunes.....	do.....	. 131	. 131	98	98
Raisins, seeded.....	do.....	. 127	. 127	101	101
Sugar, granulated.....	do.....	. 069	. 075	104	114
Coffee.....	do.....	. 302	. 302	100	100
Tea.....	do.....	. 552	. 552	100	100
All articles combined.....				104	105

The next table compares the prices on March 15 each year from 1912 to 1916.

AVERAGE MONEY RETAIL PRICES AND RELATIVE RETAIL PRICES OF FOOD ON MAR. 15 OF EACH YEAR, 1912 TO 1916.

[The relative price shows the per cent that the average price on the 15th of March in each year was of the average price of the year 1915.]

Sirloin steak.....	Pound.....	\$0.212	\$0.245	\$0.262	\$0.245	\$0.263	83	96	99	96	103
Round steak.....	do.....	.180	.212	.228	.219	.204	79	93	100	96	102
Rib roast.....	do.....	.172	.194	.200	.194	.204	86	97	100	97	102
Chuck roast.....	do.....			.166	.158	.164			103	96	102
Plate boiling beef.....	do.....			.124	.121	.124			102	99	102
Pork chops.....	do.....	.173	.208	.209	.179	.219	85	100	103	88	108
Bacon, smoked.....	do.....	.232	.266	.270	.268	.281	85	97	99	98	103
Ham, smoked.....	do.....	.230	.258	.263	.253	.276	89	100	102	103	107
Lard, pure.....	do.....	.136	.157	.157	.152	.152	92	106	106	103	103
Hens.....	do.....	.202	.214	.225	.212	.229	97	103	108	102	110
Salmon, canned.....	do.....				.200	.202				100	101
Eggs, strictly fresh.....	Dozen.....	.271	.301	.305	.251	.281	81	78	91	75	84
Butter, creamery.....	Pound.....	.371	.418	.353	.360	.407	100	116	98	100	112
Cheese.....	do.....				.233	.249				101	108
Milk, fresh.....	Quart.....	.088	.091	.092	.090	.090	98	101	102	100	100
Flour, wheat.....	1-barrel bag.....	.832	.792	.792	1.063	.953	83	80	79	100	95
Corn meal.....	Pound.....	.029	.028	.030	.032	.031	91	90		101	99
Rice.....	do.....				.091	.091				100	100
Potatoes.....	Peck.....	.419	.227	.277	.213	.300	183	99	121	98	157
Onions.....	Pound.....				.033	.045				95	128
Beans, navy.....	do.....				.075	.092				98	119
Prunes.....	do.....				.135	.131				101	98
Raisins, seeded.....	do.....				.126	.127				100	101
Sugar, granulated.....	do.....	.067	.056	.061	.068	.076	102		78	100	114
Coffee.....	do.....				.302	.302				100	100
Tea.....	do.....				.552	.552				100	100
All articles combined.....							93	95	97	96	105

All articles for which figures are available were higher on March 15, 1916, than on March 15, 1912, with one exception—potatoes.

Comparing March 15 this year with March 15 a year ago 18 articles, including all meats, show an increase; 5 articles retained the same average price, and 3 articles only show a decrease. The greatest per cent of increase was in potatoes. As a whole food advanced a little over 9 per cent between March 15, 1915, and March 15, 1916, and on March 15, 1916, the average price was 5 per cent above the average for the year 1915. The last line of the table shows by the relative number for all articles combined the increase in March, 1913, and 1914, the slight reduction in March, 1915, and the decided increase between March, 1915, and March, 1916.

RETAIL PRICES OF FOOD AND PURCHASING POWER OF THE DOLLAR IN THE UNITED STATES, 1890 TO 1915.

Changes in retail prices of certain specified food commodities and the purchasing power of the dollar in terms of each commodity are shown in the following table covering each of the 26 years from 1890 to 1915, inclusive. The figures are based on statistics presented in various reports and bulletins of this Bureau. Average retail prices for each of the 26 years and for December, 1915, are shown for each commodity included in the table except sirloin steak and rib roast, for which data were available only for the years 1907 to 1915. In Bulletin 197, Retail Prices, 1907 to December, 1915, which will shortly be published, appears a more detailed table showing similar figures for each geographical division of the United States.

AVERAGE RETAIL PRICES OF FOOD AND AMOUNT THAT COULD BE BOUGHT FOR \$1, IN THE UNITED STATES, BY YEARS, 1890 TO 1915, AND IN DECEMBER, 1915.

¹ Data not available.

AVERAGE RETAIL PRICES OF FOOD AND AMOUNT THAT COULD BE BOUGHT FOR \$1, IN THE UNITED STATES, BY YEARS, 1890 TO 1915, AND IN DECEMBER, 1915—
Concluded.

Year.	Smoked ham.		Lard, pure.		Hens.		Eggs.		Butter.	
	Average retail price per pound.	Amount bought for \$1 (pounds).	Average retail price per pound.	Amount bought for \$1 (pounds).	Average retail price per pound.	Amount bought for \$1 (pounds).	Average retail price per dozen.	Amount bought for \$1 (dozens).	Average retail price per pound.	Amount bought for \$1 (pounds).
1890.....	\$0.152	6.6	\$0.093	10.8	\$0.135	7.4	\$0.208	4.8	\$0.255	3.9
1891.....	.153	6.5	.094	10.6	.136	7.2	.221	4.5	.274	3.6
1892.....	.157	6.4	.098	10.2	.138	7.2	.221	4.5	.275	3.6
1893.....	.168	6.0	.112	8.9	.139	7.2	.224	4.5	.285	3.5
1894.....	.157	6.4	.101	9.9	.131	7.6	.199	5.0	.261	3.8
1895.....	.152	6.6	.096	10.5	.131	7.6	.206	4.9	.249	4.0
1896.....	.150	6.7	.088	11.4	.129	7.8	.192	5.2	.238	4.2
1897.....	.151	6.6	.085	11.8	.125	8.0	.189	5.3	.239	4.2
1898.....	.146	6.8	.089	11.2	.129	7.8	.199	5.0	.244	4.1
1899.....	.153	6.5	.092	10.9	.136	7.4	.209	4.8	.251	4.0
1900.....	.162	6.2	.099	10.1	.134	7.5	.207	4.8	.261	3.8
1901.....	.169	5.9	.112	8.9	.137	7.3	.219	4.6	.265	3.8
1902.....	.184	5.4	.127	7.9	.151	6.6	.247	4.0	.287	3.5
1903.....	.187	5.3	.129	8.3	.158	6.3	.259	3.9	.285	3.5
1904.....	.182	5.5	.111	9.0	.161	6.2	.271	3.7	.280	3.6
1905.....	.182	5.5	.119	9.1	.165	6.1	.272	3.7	.290	3.4
1906.....	.196	5.1	.121	8.3	.172	5.8	.278	3.6	.304	3.3
1907.....	.204	5.0	.127	7.9	.178	5.7	.285	3.5	.328	3.0
1908.....	.207	4.8	.127	7.9	.177	5.6	.291	3.4	.331	3.0
1909.....	.217	4.6	.142	7.0	.189	5.3	.315	3.2	.349	2.9
1910.....	.243	4.1	.164	6.1	.200	5.0	.332	3.0	.364	2.7
1911.....	.238	4.2	.141	7.1	.194	5.2	.318	3.1	.339	2.9
1912.....	.240	4.2	.146	6.8	.209	5.0	.335	3.0	.378	2.6
1913.....	.266	3.8	.158	6.3	.214	4.7	.338	3.0	.385	2.6
1914.....	.271	3.7	.157	6.4	.219	4.6	.348	2.9	.364	2.7
1915.....	.258	3.9	.148	6.8	.206	4.8	.335	3.0	.369	2.8
December, 1915.	.266	3.8	.145	6.9	.204	4.9	.459	2.2	.389	2.6

Year.	Fresh milk.		Flour, wheat.		Corn meal.		Potatoes, Irish.		Sugar, granulated.	
	Average retail price per quart.	Amount bought for \$1 (quarts).	Average retail price per barrel sack.	Amount bought for \$1 (sacks).	Average retail price per pound.	Amount bought for \$1 (pounds).	Average retail price per peck.	Amount bought for \$1 (pecks).	Average retail price per pound.	Amount bought for \$1 (pounds).
1890.....	\$0.068	14.7	\$9.711	1.41	\$0.019	52.6	\$0.247	4.0	\$0.069	14.5
1891.....	.068	14.7	.729	1.37	.021	47.6	.264	3.8	.060	16.7
1892.....	.068	14.7	.681	1.47	.020	50.0	.217	4.6	.066	17.9
1893.....	.068	14.7	.623	1.61	.020	50.0	.254	3.9	.059	16.9
1894.....	.068	14.7	.575	1.74	.019	52.6	.232	4.3	.055	18.2
1895.....	.068	14.7	.577	1.73	.019	52.6	.208	4.8	.063	18.9
1896.....	.068	14.7	.601	1.66	.018	55.6	.174	5.7	.056	17.9
1897.....	.067	14.9	.676	1.48	.018	55.6	.211	4.7	.056	17.9
1898.....	.067	14.9	.696	1.44	.018	55.6	.239	4.2	.059	16.9
1899.....	.067	14.9	.613	1.63	.018	55.6	.218	4.6	.059	16.9
1900.....	.068	14.7	.611	1.64	.019	52.6	.212	4.7	.061	16.4
1901.....	.068	14.7	.612	1.63	.020	50.0	.264	3.8	.060	16.7
1902.....	.070	14.3	.615	1.63	.023	43.5	.265	3.8	.066	17.9
1903.....	.072	13.9	.656	1.52	.023	43.5	.260	3.8	.056	17.9
1904.....	.072	13.9	.777	1.29	.023	43.5	.275	3.6	.059	16.9
1905.....	.072	13.9	.777	1.29	.023	43.5	.249	4.0	.060	16.7
1906.....	.074	13.5	.791	1.43	.023	43.5	.259	3.9	.057	17.5
1907.....	.079	12.7	.763	1.31	.025	40.0	.273	3.7	.058	17.2
1908.....	.081	12.3	.813	1.23	.027	37.0	.286	3.5	.059	16.9
1909.....	.083	12.0	.873	1.15	.027	37.0	.289	3.5	.059	16.9
1910.....	.086	11.6	.863	1.16	.028	35.7	.261	3.8	.060	16.7
1911.....	.086	11.6	.813	1.23	.027	37.0	.337	3.0	.061	16.4
1912.....	.088	11.4	.843	1.19	.026	38.5	.341	2.9	.063	15.9
1913.....	.091	11.0	.893	1.25	.029	34.5	.259	3.9	.055	18.2
1914.....	.091	11.0	.833	1.20	.030	33.3	.280	3.6	.059	16.9
1915.....	.090	11.1	1.003	1.00	.031	32.3	.229	4.4	.066	15.2
December, 1915.	.090	11.1	.913	1.10	.031	32.2	.275	3.6	.068	14.7

PROFIT SHARING IN THE UNITED STATES.

A recent report on profit sharing by the welfare department of the National Civic Federation¹ summarizes the past and present experiences of employers in the application of the profit-sharing principle for the benefit of their employees. It also presents in a summary fashion some types of profit-sharing plans in operation in France and England.

Compilation of this report was undertaken for the purpose of presenting "an accurate and unbiased statement of the facts," because profit sharing "has been regarded by many employers and a few eminent students of industrial tendencies as forecasting a final solution of the labor problem." The descriptions of the individual plans, however, which take up by far the largest part of the report, are "based almost wholly upon data furnished by the companies." The opinions of employers and the attitude of trade-unions on the problem of profit sharing are based upon statements especially formulated for the report by well-known representatives of employers as well as by representatives of organized labor.

The general nature of the report may be judged, to some extent, by the headings of its principal sections which are as follows: Definition; Some French types; Experience in England; American Systems; Opinions of American employers; Attitude of trade-unionists; and Difficulties of profit sharing.

The report notes that the term "profit sharing" has been misused, or used somewhat indiscriminately to denote schemes bearing no definite relation to the profits of the enterprise. For purposes of clarification the author of the report classifies the different American profit-sharing plans examined—about 200 in all—into three general groups: (1) Plans under which a specific proportion of the net profits, fixed in advance, is distributed; (2) Plans involving distribution of gratuities, voluntarily made by employers from time to time; (3) Stock ownership plans under which employees purchase stock in the employing corporation on especially favorable terms. Attention is also given to certain exceptional plans which have obtained publicity as profit-sharing plans although not essentially so.

The earliest American plan cited by the report is that of the Bay State Shoe & Leather Co., adopted in 1867. Under this plan employees received 25 per cent of the net profits of the company. The plan continued in operation for six years and was abandoned because the employees struck for higher wages. Other early plans were those of the A. S. Cameron Co., of Jersey City, N. J., established in 1869; of the Brewster Co., a New York firm of carriage builders,

¹ Profit sharing by American employers. New York City [1916]. 261 pp.

adopted in 1870; of the Peace Dale Manufacturing Co., of Peace Dale, R. I., adopted in 1878; of the Rand, McNally & Co., in 1879 and still in force; of the N. O. Nelson Manufacturing Co., in 1886 and still operative; and of the Procter & Gamble Co., in 1887 and still operative.

Summing up the results of the study the author states that of the 200 plans that have been analyzed a great many "have been abandoned as acknowledged failures." The relatively large proportion of "dubious" results, however, ought not to lead one to the conclusion that profit sharing is "worthless," because other plans of the same kind, from the standpoint of special local conditions, or by contrast with some previous order of things, "no doubt show a net improvement in the welfare of the employees affected and the morale of the plants."

The views of a considerable number of labor leaders on the question of profit sharing were sought and obtained. All of these informants, without exception, voiced their emphatic opposition to the principle as well as to its application, on the grounds that such plans invariably result in discouraging collective bargaining, have a tendency to hinder the development of labor organizations, and in their actual application are confined to employees of higher grades, excluding from their benefits the rank and file of the workers. The latter assertion, the report states, "is borne out by the statistics of many of these experiments."

With reference to the attitude of employers the report states that a large number of the companies whose plans have been analyzed in the body of the report, stated that they "considered profit sharing a success" and that others "presumably hold the same view from the fact that they continue the experiments from year to year." Employers having profit-sharing plans in operation think that the application of the principle "promotes more continuous service, reduces the cost of production, secures more regular attendance at work, builds up confidence, and creates a spirit of cooperation."

But while most of the objections to profit sharing come from the side of organized labor, some employers who have had experience on the subject "are by no means a unit as to its practical value." Some of these employers express disappointment that their efforts were not appreciated by their employees, that the latter "seemed to prefer their total earnings in fixed wages, that they were suspicious of their employers' motives, that they insisted upon joining unions and presenting demands in spite of the companies' effort to give them a share in the extra gains of the business."

To the report there are appended three signed articles, one on "The difficulties of profit sharing," by J. W. Sullivan; another on

"Should wage earners invest in corporation stocks?" by R. M. Easley; and one on "The legal status of employer and employee," by Francis X. Butler.

Profit sharing will be the subject of a forthcoming bulletin of the Bureau of Labor Statistics, based on a study of the experience and records of a large number of employers.

PROFIT SHARING IN GREAT BRITAIN.

On June 30, 1915, 153 firms in Great Britain maintained some form of profit sharing in connection with their business. This is three less than the number operated on June 30, 1914. These figures are given by the British Board of Trade Labor Gazette for November, 1915, based on inquiries which have been made annually by the board of trade since the publication of its report on profit sharing in the United Kingdom in 1912. Seven profit-sharing schemes were reported to the British office since publication of its annual statistics for 1913-14. Three of the schemes reported at that time have been definitely abandoned, while three, on account of the war, have been temporarily suspended.

Of the seven newly established plans, three have been started by gas companies, "the most important group in which profit sharing is in force." The scheme involving the largest number of employees (3,580) was that reported by a firm of retail grocery and provision merchants.

In explanation of the decline of the number of profit-sharing schemes reported to the board of trade during this year, it is stated that many firms have abandoned attempts at profit sharing on account of conditions arising out of the war.

Concerning the three firms reported to have abandoned profit sharing one is in liquidation, one reported that a limited liability company had been formed in which some of the employees had been encouraged to take shares, while another firm gave as a reason for its abandonment of the profit-sharing idea, "incompatibility with trade-union ideas."

The average number of persons in the permanent employ of the 153 firms known to have profit-sharing schemes on June 30, 1915, was 141,112 applicable for the 12 months preceding the declaration of profits in 1914.

The following table shows by classified percentages the ratio of the bonus to wages, as based on 121 reports during 1914:

RATIO OF BONUS TO WAGES IN 1914.

Ratio of bonus to wages of participants in 1914.	Number of declarations of bonus reported upon.	Total number of permanent employees.	Number of participating employees.
Nil.....	18	4,342	12,107
Under 1 per cent.....	1	380	235
1 and under 2 per cent.....	4	578	502
2 and under 3 per cent.....	9	28,772	4,262
3 and under 4 per cent.....	9	1,998	1,851
4 and under 5 per cent.....	11	2,598	1,690
5 and under 6 per cent.....	23	18,975	15,654
6 and under 8 per cent.....	24	30,012	25,758
8 and under 10 per cent.....	10	10,481	9,375
10 and under 12 per cent.....	2	1,461	218
12 and under 16 per cent.....	5	9,751	6,336
16 and under 20 per cent.....	2	1,434	1,147
Over 20 per cent.....	3	186	76

Taking into account all cases the amounts allowed to employees under the 121 declarations of bonuses added 6.7 per cent to the total wages paid to employees participating in such schemes. If there are excluded those cases in which no profit sharing bonus was paid, the increase amounted to 6.9 per cent. Reports from 127 firms showed that the total amount paid in bonuses came to £370,246 (\$1,801,802) distributed among 71,268 employees (including 567 not permanently employed), or an average of £5 3s. 11d. (\$25.28) for each participating employee.

THIRD ANNUAL MEETING OF COMPENSATION COMMISSIONERS.¹

The Third Annual Meeting of the International Association of Industrial Accident Boards and Commissioners was held at Columbus, April 25 to 28, inclusive, delegates from 19 States, one Canadian Province, the United States Bureau of Labor Statistics, and the American Museum of Safety being in attendance. Addresses of timely interest in connection with workmen's compensation, accident prevention, and kindred subjects were made. As a part of the meeting, the first session of the newly authorized medical section was held, and a safety committee was organized to form the nucleus of a proposed safety section, later indorsed by the association, to advance the promotion of accident prevention.

The first session was called to order by the vice president, Wallace D. Yaple, who outlined the growth of the workmen's compensation idea in the various States. Floyd L. Daggett, of Washington, president of the association, was not present, but his response and opening address was read by Dudley M. Holman, of Massachusetts. In the

¹ Bulletin No. 201 (in press) of the United States Bureau of Labor Statistics contains in full the proceedings of these meetings.

evening Gov. Frank B. Willis welcomed the delegates in behalf of the State, and spoke in support of the workmen's compensation idea in general and of the Ohio plan in particular. During the convention papers were read as follows:

"The right of appeal under workmen's compensation laws; the constitutional necessity therefor and the most appropriate method of taking the same," by Fred M. Wilcox, member of the Industrial Commission of Wisconsin.

"Conflicts between Federal and State jurisdictions in commerce cases," by A. J. Pillsbury, chairman of the Industrial Accident Commission of California.

"Merit rating in workmen's compensation insurance," by Emile E. Watson, actuary, Industrial Commission of Ohio.

"Compulsory investigation of industrial disputes," by Wayne C. Williams, member of the Industrial Commission of Colorado.

"The why and how of uniform industrial accident statistics for the United States," by Royal Meeker, Commissioner of the United States Bureau of Labor Statistics.

"The use of accident statistics for accident prevention," a paper prepared by W. H. Burhop, statistician of the Industrial Commission of Wisconsin, and read by L. A. Tarrell, chief examiner of the Wisconsin Commission.

"Educational work in accident prevention," by Dudley M. Holman, member of the Industrial Accident Board of Massachusetts.

"The theory and practice of compensation," by Wm. C. Archer, deputy commissioner of the State Industrial Commission of New York.

"A comparison of the methods of dealing with permanent partial disability cases," by George A. Kingston, commissioner of the Workmen's Compensation Board of Ontario.

"Ohio's experience with State insurance," by Thos. J. Duffy, member of the Industrial Commission of Ohio.

"The relation of workmen's compensation to old age, health, and unemployment insurance," by Royal Meeker, Commissioner of the United States Bureau of Labor Statistics.

A paper prepared by Will J. French, member of the Industrial Accident Commission of California, on "Cooperative methods to promote industrial safety," was not read but was ordered published in the proceedings.

The report of the committee on statistics and compensation insurance cost was presented by E. H. Downey, special deputy, Insurance Department of Pennsylvania, and adopted by the association.¹ The committee which prepared the report was continued, its members being as follows: E. H. Downey, special deputy, Insurance Department of Pennsylvania, chairman; Royal Meeker, Commissioner, United States Bureau of Labor Statistics; E. E. Watson, actuary, Industrial Commission of Ohio; L. W. Hatch, chief statistician, Industrial Commission of New York; W. H. Burhop, chief statistician, Industrial Commission of Wisconsin; Don D. Lescohier, chief statistician, Minnesota Department of Labor; Mr. Broderick, statistician, Industrial Accident Board of Massachusetts; F. C. Croxton, chief statistician, Industrial Commission of Ohio.

¹ Uniform classification of industries, injuries, and accident causes, as presented by this committee, are included in Bulletin No. 201 (in press) of the United States Bureau of Labor Statistics.

Resolutions were adopted by the association as follows:

Indorsing the bill in Congress to extend second-class mail privileges to publications of the State departments of agriculture and of industry and labor.

Requiring a synopsis of all addresses to be forwarded for printing and promulgation at least two months prior to each meeting.

Requesting Mr. John Mitchell, chairman of the Industrial Commission of New York, to prepare a paper on the subject of "The physical examination of employees," to be published with the proceedings of the convention; also requesting Dr. Sidney M. McCurdy to submit for publication, as a part of the proceedings, his remarks in connection with the discussion of this subject.

Recommending a single term for the presidency of the association.

Suggesting a special conference on social insurance, under the auspices of the Industrial Accident Boards and Commissions, to be called to meet at Washington, D. C., in September or October of this year, to hear the proponents and opponents of various plans of social insurance, and this in order that the association constantly may be apprised of the relation of such proposed legislation to workmen's compensation; that invitations be issued freely to all interested parties to participate; and that the program for such meeting be arranged by a committee to be appointed by the chairman to be elected for the ensuing year. The following committee was named: Hon. Royal Meeker, of Washington, D. C., chairman; Dudley M. Holman, of Massachusetts; Fred M. Wilcox, of Wisconsin; J. B. Vaughn, of Illinois; and Wallace D. Yaple, of Ohio.

Authorizing the medical delegates to organize a separate section, which section shall remain an integral part of the organization, this in order that such delegates may at conventions devote their entire time to medical questions of common interest. The medical section organized by electing Dr. Raphael Lewy, of New York, president; Dr. Francis D. Donoghue, of Massachusetts, vice president; Dr. W. H. White, of Ohio, secretary-treasurer.

Recognizing the interstate safety committee, comprising delegates from eight States as organized at Columbus on April 26, as a safety and health promotion section, and recognizing the chairman of such organization as the committee chairman of this section. Victor T. Noonan, safety director of the Industrial Commission of Ohio, was elected committee chairman.

Requesting the Federal Bureau of Labor Statistics to publish from this time the proceedings of the conventions and conferences of the association.

Memorializing Congress to amend the employers' liability act of 1908-1910, and any Federal compensation law that may be enacted, so as to exempt from the operation of such law or act all States and

Territories of the United States having in operation compulsory compensation laws competent to afford adequate protection to employees engaged in transportation by railroad, whether in interstate or intrastate commerce, and to permit railroads and their employees to elect to operate under compensation laws in States in which such laws are elective, thereby divesting injuries sustained in transportation by railroad of their interstate character in all such States while retaining under Federal jurisdiction all States and Territories which do not enact and enforce laws providing for compensation to injured workmen without regard to negligence.

Boston was selected as the place of the next meeting, during the third week in August, 1917. The following officers were elected: Wallace D. Yapple, of Ohio, president; Fred M. Wilcox, of Wisconsin, vice president; the Commissioner of the United States Bureau of Labor Statistics, Washington, D. C., secretary-treasurer. Believing that the president should be from Massachusetts, in which State the next meeting is to be held, Mr. Yapple offered his resignation as president and Dudley M. Holman, of the Industrial Accident Board of Massachusetts, was elected in his stead. The executive committee was instructed to revise the constitution and by-laws before the next meeting. The following delegates were in attendance:

Name.	Address.	Office.
A. J. Pillsbury.....	San Francisco, Cal.....	Chairman, Industrial Accident Commission.
Wayne C. Williams.....	Denver, Colo.....	Member, Industrial Commission.
J. B. Vaughn.....	Chicago, Ill.....	Chairman, Industrial Board.
Edgar A. Perkins.....	Indianapolis, Ind.....	Chairman, Industrial Board.
Chas. R. Hughes.....	Indianapolis, Ind.....	Member, Industrial Board.
A. B. Funk.....	Des Moines, Iowa.....	Industrial Commissioner.
E. S. Montell.....	Baltimore, Md.....	Manager, Industrial Accident Commission.
Dr. Robt. P. Bay.....	Baltimore, Md.....	Chief medical examiner, Industrial Accident Commission.
Dudley M. Holman.....	Boston, Mass.....	Member, Industrial Accident Board.
Dr. Francis Donoghue.....	Boston, Mass.....	Chief medical examiner, Industrial Accident Board.
C. A. Durand.....	Lansing, Mich.....	Manager, State accident fund.
Dr. Don. D. Lescobier.....	St. Paul, Minn.....	Statistician, Department of Labor and Industry.
W. J. Swindlehurst.....	Helena, Mont.....	Commissioner of Labor.
John Roach.....	Trenton, N. J.....	Acting Chief, Bureau of Hygiene and Safety.
Wm. C. Archer.....	New York City.....	Deputy Commissioner, State Industrial Commission.
Dr. Raphael Lewy.....	New York City.....	Chief medical examiner, State Industrial Commission.
L. W. Hatch.....	Albany, N. Y.....	Statistician, State Industrial Commission.

W. L. Blessing.....	Oklahoma City, Okla.....	Member, Industrial Commission.
Geo. A. Kingston.....	Toronto, Ontario.....	Member, Workmen's Compensation Board.
T. N. Dean.....	Toronto, Ontario.....	Statistician, Workmen's Compensation Board.
Carle Abrams.....	Salem, Oreg.....	Member, Industrial Accident Commission.
Dr. F. H. Thompson.....	Salem, Oreg.....	Chief medical examiner, Industrial Accident Commission.
E. H. Downey.....	Harrisburg, Pa.....	Special deputy, State Insurance Department.
Lee Ott.....	Charleston, W. Va.....	Workmen's Compensation Commissioner.
Fred M. Wilcox.....	Madison, Wis.....	Member, Industrial Commission.
Geo. P. Hambrecht.....	Madison, Wis.....	Member, Industrial Commission.
L. A. Tarrell.....	Madison, Wis.....	Chief examiner, Industrial Commission.
Herman B. Gates.....	Cheyenne, Wyo.....	State treasurer.
Royal Meeker.....	Washington, D. C.....	U. S. Commissioner of Labor Statistics.
• C. H. Verrill.....	Washington, D. C.....	U. S. Bureau of Labor Statistics.
Dr. William H. Tolman...	New York City.....	Director, American Museum of Safety.
Wallace D. Yapple....,	Columbus, Ohio.....	Chairman, Industrial Commission.
Thos. J. Duffy.....	Columbus, Ohio.....	Member, Industrial Commission.
Geo. L. Stoughton.....	Columbus, Ohio.....	Secretary, Industrial Commission.
Lloyd D. Teeters.....	Columbus, Ohio.....	Assistant secretary, Industrial Commission.
Harold D. Sites.....	Columbus, Ohio.....	Assistant secretary, Industrial Commission.
H. H. Haman.....	Columbus, Ohio.....	Director of claims, Industrial Commission.
H. W. Putnam.....	Columbus, Ohio.....	Chief auditor, Industrial Commission.
Emile E. Watson.....	Columbus, Ohio.....	Actuary, Industrial Commission.
Dr. W. H. White.....	Columbus, Ohio.....	Chief medical examiner, Industrial Commission.
Fred C. Croxton.....	Columbus, Ohio.....	Chief statistician, Industrial Commission.
Victor T. Noonan.....	Columbus, Ohio.....	Safety director, Industrial Commission.
F. M. Secrest.....	Cleveland, Ohio.....	Deputy, Industrial Commission.
S. S. Stewart.....	Cincinnati, Ohio.....	Deputy, Industrial Commission.
Arnold S. Althoff.....	Dayton, Ohio.....	Deputy, Industrial Commission.

WORKMEN'S COMPENSATION LAWS AS APPLIED TO RAILROAD EMPLOYEES.

Synopsis of a paper entitled "Conflicts between Federal and State jurisdictions in commerce cases," read by A. J. Pillsbury, chairman of Industrial Accident Commission of California, at the Third Annual Meeting of the International Association of Industrial Accident Boards and Commissions, Columbus, Ohio, April 26, 1916:

There are conflicts of jurisdiction between the Federal Government and States having compensation laws dependent upon whether or not, at the instant of the injury, the employee was engaged in interstate or intrastate commerce.

This conflict often makes it necessary to try cases, first, to determine the jurisdiction, and afterwards to find out whether or not applicant is entitled to recover.

There are in the United States approximately 2,000,000 railroad employees more or less subject to the costs, annoyances, and uncertainties of this conflict on the division of jurisdiction.

For the year ending June 30, 1915, 2,195 railroad employees were killed in the United States and 139,550 injured.

The Federal employers' liability law of 1908-1910 was, when it was enacted, a great advance on what the States had done for the indemnification of railroad men for injuries received in the course of their employment, but since then 31 States have enacted compensation laws far in advance of the liability law of 1908.

The liability law was based on negligence, but with old, drastic, common-law conditions greatly modified. The compensation laws are without regard to negligence.

The courts have been able to lay down no rule for determining, without a hearing, whether or not an injury happened in interstate or intrastate commerce.

The Federal laws have exclusive jurisdiction over all injuries happening while the employee is engaged in interstate commerce, and in cases where it is impossible to determine whether or not the injury happened in interstate or intrastate commerce.

The Federal law has, and can have, no jurisdiction over injuries happening in intrastate commerce, thereby making it impossible for Congress to enact a uniform liability or compensation law covering all injuries sustained in commerce by railroad.

The well-being of railroad employees, and efficiency in administration or execution of such laws, requires that all such cases within a State be under one jurisdiction.

It would be preferable, were it possible, for the whole subject matter to be under the jurisdiction of the Federal Government.

Inasmuch as, according to the decisions of the Supreme Court of the United States, such a consummation is not possible, the next best thing is for the Federal Government to relinquish the whole subject matter to the jurisdiction of States having adequate compensation laws.

The best interests of railroad employees working in States not having adequate compensation laws require that the Federal authority maintain its jurisdiction over such States.

The crucial question involved is as to whether or not Congress can constitutionally enact an ununiform liability or compensation law—that is, a law operative in some States and not in others.

There is no specific requirement in the Constitution of the United States that all laws shall be uniform, but only that all shall be entitled to the equal protection of the law.

The Webb-Kenyon liquor law has declared it unlawful to transport liquors into any State to be consumed in any manner contrary to the laws of such prohibition State. In other words, Congress has divested liquors of their interstate character as to prohibition States.

May not Congress likewise divest injuries received in the operation of railroads of their interstate character whenever they happen in States having adequate compensation laws?

Injuries sustained in the operation of railroads are not proximately of concern to the Nation, but to the States and their political subdivisions which must care for those crippled, widowed, or orphaned as results of such injuries.

The interests of the Nation in the subject matter are relatively remote and inconsequential.

Two States of the Union, New York and New Jersey, have recently denied that there is any conflict between the Nation and such States in relation to compensation.

The Federal law fixes liability only where there is negligence on the part of the carrier or the fellow servants of an injured employee. State compensation laws fix liability without regard to negligence. It is claimed that the two jurisdictions do not relate to the same field and therefore can not conflict. The issue is now before the Supreme Court of the United States for determination.

The crux of the issue has been missed by both sides to the controversy.

That crux is that compensation for industrial injuries, however and wherever suffered, has, and should have, no essential, constitutional connection with commerce, either interstate or intrastate, but belongs to the realm of local, domestic, social insurance against the hazards of poverty, with which the Federal Government should have only a general concern.

"Compensation" is one factor in a forthcoming general scheme of social insurance, and, as such, differs in no important particular from insurance against the hazards of sickness, unemployment, old age, premature death, invalidity, maternity.

Could a railroad company plead for exemption from the operation of a sickness or unemployment insurance law of a State on the ground that its employees were engaged in interstate commerce? If not, then why against insurance against the consequences of industrial accident?

Why is this power of the Federal Government asserted only in relation to industrial injuries and not in relation to taxation, the compulsory insurance of passengers against injury, their baggage against loss, freight against destruction, and farmers' crops against fire caused by sparks from locomotives—all without regard to negligence?

A Federal compensation law would be impracticable, because:

- (a) It can not occupy the whole field, interstate and intrastate.
- (b) The jury system is constitutionally requisite, but wholly unsuited to compensation cases.
- (c) Courts are little better fitted for this service than juries.
- (d) A national commission covering all States would culminate in a huge and undesirable bureaucracy.

Recommendations.

1. Ask Congress to so amend the employers' liability act as to divest injuries of their interstate character when they happen in States having compulsory compensation laws covering injuries to railroad employees.

2. Include the same provision in any Federal compensation law that may be enacted.

3. Permit railroads in States having elective compensation laws to accept such acts in lieu of Federal laws on the same subject.

KENTUCKY WORKMEN'S COMPENSATION LAW.

In the April number of the **MONTHLY REVIEW** some account was given of the report of a voluntary commission of the State of Kentucky which undertook to draft a workmen's compensation law for the consideration of the session of the legislature of the State recently closed. The bill drafted by the commission did not become law, but an act embodying its principal features was passed and received the approval of the governor on March 23, 1916, to take effect August 1 following. The system provided is one of elective compensation, with provision for positive choice of the measure by the employer by filing a written statement with the State Workmen's Compensation Board and posting a notice of the fact in his establishment. The employee must also file with his employer a signed notice of his acceptance of the act. Employers failing to accept the act are deprived of the common-law defenses of contributory negligence, fellow service, and assumed risks. This method of inducement does not extend to domestic and farm labor nor to establishments in which less than five persons are employed; these classes may, however, accept the act by joint application of employer and employee.

The compensation is on a 65 per cent basis, with provision for funeral expenses not in excess of \$75, and medical and surgical aid during the first 90 days, the cost not to exceed \$100. Death benefits may not exceed \$12 weekly nor be less than \$5 for a period of 335 weeks, the total not to exceed \$4,000. For total disability the same maximum and minimum amounts are fixed to run for a period of 8 years, the total not to exceed \$5,000. Where disability is partial, compensation is determined by the wage loss, subject to \$12 maximum for not more than 335 weeks and not more than \$4,000 in amount. A schedule of fixed periods of compensation is provided for specified injuries.

Public employees are included at their own election.

The administration of the act rests with a workmen's compensation board, and the State is divided into three districts for convenience of administration. Employers accepting the act must insure their liability in a stock or mutual company or in a special organization created by the act under the title "State Employees' Insurance Association," or they may be relieved of this obligation on giving proof of financial ability. Self-insurers must, however, furnish bond or other security.

Payments to a widow or widower cease on remarriage, and to a child on reaching the age of 16 unless incapacitated for wage earning.

WORK OF MASSACHUSETTS MINIMUM WAGE COMMISSION.

The report of the Massachusetts Minimum Wage Commission for 1915 is a pamphlet of 35 pages, containing a brief review of the activities of the commission, some proposed legislation intended to increase its efficiency, the text of the law creating the commission, and minimum wage decrees affecting the brush industry, laundries, and retail stores. To the close of 1915 the commission investigated occupations containing more than 50,000 female employees and established wage boards to deal with occupations containing nearly 40,000 female employees. Since its organization, in 1913, it has inquired into the wages paid to women in nine industries, the facts set forth in the following table, prepared by the State bureau of statistics, being offered to justify the commission in believing that wages were too low in these occupations:

NUMBER OF EMPLOYEES AND PER CENT OF FEMALES EARNING UNDER \$6 AND UNDER \$8 WEEKLY IN EACH SPECIFIED INDUSTRY IN MASSACHUSETTS, 1913.

Industry. ¹	Number of establishments.	Average number of employees.		Per cent of females with weekly earnings— ²	
		Males.	Females.	Under \$6.	Under \$8.
Brushes.....	27	771	795	25.4	66.6
Corsets.....	11	326	2,651	21.9	49.9
Confectionery.....	121	1,882	5,343	31.5	71.2
Laundries.....	377	2,831	5,329	14.4	59.7
Boxes, fancy and paper.....	95	1,488	2,807	18.4	47.7
Clothing, women's.....	184	1,425	4,627	13.6	39.6
Hosiery and knit goods.....	65	2,932	7,807	16.7	46.5
Clothing, men's.....	206	2,634	3,179	13.5	42.8

¹ Figures for women employed in retail stores are not furnished by the bureau of statistics.

² This includes only females 18 years of age or over for the week of employment of the greatest number, and shows their rates of payment. This showing is therefore much more favorable than would be the actual average weekly earnings of all females, or the same females for the whole year.

Under the Massachusetts minimum wage law, the commission is given authority to establish minimum wage boards, and this power was exercised in seven instances:

These wage boards are directed by law to take into consideration the needs of employees and the financial condition of the occupation and the probable effect thereon of any increase in the minimum wages paid, and to endeavor to determine the minimum wage suitable for a female employee of ordinary ability in the occupation in question, and also suitable minimum wages for learners and apprentices and for minors below the age of 18 years. When a majority of the members of a wage board agree upon minimum wage determinations, they are to report such determinations to the commission, together with the reasons therefor and the facts relating thereto.

Four wage boards reported. The brush makers' board recommended a minimum wage for experienced workers of 15½ cents per hour. The candy board recommended a minimum rate of \$8.75 a week; the laundry board \$8, and the retail store board \$8.50 a week.

Lower rates were recommended for inexperienced workers. The determinations reported by these wage boards were approved by the commission and are in effect.¹ The differences in the minimum rates recommended by the various boards are due to the fact that the rates are fixed with regard to the financial conditions of the industries and the probable effect thereon of any increase in the minimum wages paid.

The effect of the minimum wage determination in the brush industry was made the subject of a special investigation by the commission which found (1) that the establishment of the minimum wage has been followed by a remarkable increase in the earnings of women employees in that industry, (2) that the employment of women at ruinously low rates was practically stopped, (3) that the proportion of women employed at more than the prescribed minimum rate has more than doubled, and (4) that all this has been accomplished without putting an unreasonable financial burden upon the industry.²

In order that the commission may be able to know definitely whether low earnings are the result of unreasonably low rates of wages or of irregular employment at rates in themselves not unreasonably low, the commission has recommended that legislation be enacted requiring every employer to keep a record of the number of hours each week for which women and minors in their employ are paid. An act to provide for the filling of vacancies on wage boards is also deemed necessary. The experience of the commission seemed to show that further powers of enforcement are necessary to insure proper publicity for its decrees, and it therefore recommends the passage of an act requiring employers to post all bulletins issued by the commission regarding the minimum rates of wages for female employees, with provision for a fine in case of violation.

The appropriation for the fiscal year ending November 30, 1915, was \$17,900 and the commission believes that more money is necessary to enable it to investigate other industries containing about 30,000 female employees and to support the work of wage boards. It is stated that the total number of girls and women over 18 years of age employed in Massachusetts in 1913 was 189,743. This does not include establishments with less than \$5,000 value of product, nor girls in laundries, retail stores and several other important occupations in which women are employed.

¹ The determination affecting the candy industry was to have been effective on October 1, 1915, but the matter is in abeyance pending legal proceedings involving the organization of the candy maker's wage board.

² Bulletin No. 7, September, 1915: The effect of the minimum wage decrees on the brush industry in Massachusetts. For digest of this bulletin see MONTHLY REVIEW for December, 1915, p. 33.

SPECIAL INVESTIGATIONS BY THE COMMISSION.

Bulletin No. 8 and Bulletin No. 10 of the minimum wage commission present, respectively, a report on wages of women in the paper-box factories¹ and the hosiery and knit-goods factories.² The history and growth of each industry in the United States are briefly traced, and it is stated that in 1909 Massachusetts occupied third place in the manufacture both of paper boxes and knit goods, the value of its product in the former case being 10.6 per cent of the total, and the value of its knit goods products being 7.4 per cent of the total. The following figures, gathered by the State bureau of statistics in 1913, indicate the importance of these industries:

IMPORTANCE OF THE MANUFACTURE OF PAPER BOXES AND HOSIERY AND KNIT GOODS IN MASSACHUSETTS, 1913.

Item.	Paper-box factories.	Hosiery and knit-goods factories.
Number of establishments.....	95	65
Capital.....	\$4,054,193	\$14,660,406
Value of products.....	\$6,898,723	\$16,093,510
Wages.....	\$1,953,130	\$4,813,407
Employees:		
Males, 18 years of age and over.....	1,413	2,671
Females, 18 years of age and over.....	2,308	6,758
Females under 18 years of age.....	599	1,264

During February, March, and April, 1915, the minimum wage commission made a study of wages and rates for the various occupations in the paper-box industry, and during September, October, and November, following, a similar study was made of the hosiery and knit-goods industry. In these investigations consideration of such subjects as sanitation, overtime, accidents, living arrangements and expenses of the women employees was omitted. Twenty-four paper-box factories and 27 knit-goods factories situated in 15 cities and towns were studied, and a transcript of the pay roll for each female employed was taken for a period of 52 weeks preceding the date of the initiation of the inquiry. Four paper-box factories and 18 hosiery and knit-goods factories kept records of the number of hours worked by the female employees, and these were also transcribed. All records of persons who appeared on the pay roll for less than four weeks were disregarded. The procedure adopted by the commission in computing weekly earnings and hours of work each week for individual workers was as follows:

The sum of all payments made during the 52-week period—that is, the girl's total income from her work for the year—was found. This sum was divided by the number of weeks during which she was actually at work, as indicated by the number of weekly

¹ Massachusetts. Minimum Wage Commission. Bul. No. 8. Wages of women in the paper-box factories, Boston, 1915. 38 pp.

² Massachusetts. Minimum Wage Commission. Bul. No. 10. Wages of women in hosiery and knit-goods factories. Boston, 1916. 37 pp.

payments made to her. When the weekly payment was for a paid vacation, the vacation week was counted as a week actually worked. In this way her average weekly earnings for the time she was at work in the occupation under consideration was ascertained. A corresponding procedure was adopted in treating hours of work.

In the paper-box industry the records of 2,178 women were obtained, and a summary of the results of this investigation shows that 970, or 44.5 per cent, earned less than \$6 a week, and that 350, or 16.1 per cent, earned less than \$4 a week. More than three-fourths, 75.7 per cent, earned less than \$8 a week. It will be noted in the following table, which presents the weekly wages received and the weekly rates at which workers are scheduled to be paid, that the per cent scheduled to receive less than \$6 a week (55 per cent) was somewhat higher than the per cent actually earning less than \$6. The report attempts to account for this by suggesting that many high paid workers, who are largely all pieceworkers, could not be included in the rate table and this table therefore represents mainly low-paid timeworkers. Less than one-third (31.1 per cent) of the workers did not receive as much as \$100 in the course of the year, and more than one-half (53.7 per cent) earned less than \$250. It was found that weekly earnings differed widely in different factories; for instance, in three factories studied more than one-half of the women employees were paid less than \$5 a week, while in two other factories no woman employed averaged less than that amount.

In the hosiery and knit-goods factories the records of 3,460 women were obtained. It appears from the table that 40.7 per cent earned less than \$6 a week and that 11.8 per cent earned less than \$4 a week. Slightly more than 74 per cent earned less than \$8. Nearly a thousand workers, 944, or 27.3 per cent, earned less than \$100 in the course of the year.

WEEKLY EARNINGS AND WEEKLY RATES AT WHICH WORKERS ARE SCHEDULED TO BE PAID IN PAPER-BOX FACTORIES, AND WEEKLY EARNINGS IN THE HOSEY AND KNIT-GOODS FACTORIES, IN MASSACHUSETTS.

Wages.	Paper-box factories.				Hosiery and knit-goods factories. ¹	
	Weekly rates.		Weekly earnings.		Weekly earnings.	
	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
Under \$3.....			99	4.6	116	4.2
\$3 and under \$4.....	17	3.7	251	11.5	263	7.6
\$4 and under \$5.....	118	25.3	308	14.1	420	12.2
\$5 and under \$6.....	121	26.0	312	14.3	579	16.7
\$6 and under \$7.....	51	10.9	346	15.9	633	18.3
\$7 and under \$8.....	48	10.3	333	15.3	531	15.4
\$8 and under \$9.....	40	8.6	212	9.7	423	12.2
\$9 and over.....	71	15.2	317	14.6	465	13.4
Total.....	² 466	100.0	2,178	100.0	3,460	100.0

¹ The weekly rates for women employees in these factories were not obtained.
² Pieceworkers and all timeworkers whose rates were not available are excluded

The commission found a wide divergence in actual earnings not only in the different branches of the hosiery and knit-goods industry, but also between different establishments manufacturing the same lines and grades of goods. In general, the firms manufacturing underwear paid higher wages than those making hosiery, sweaters, and miscellaneous products. This is indicated in the following table:

PER CENT (CUMULATIVE) OF WORKERS EARNING INDICATED AVERAGE WEEKLY WAGES IN EACH SPECIFIED KIND OF FACTORY IN THE HOSE AND KNIT-GOODS INDUSTRY IN MASSACHUSETTS.

Product.	Under \$3.	Under \$4.	Under \$5.	Under \$6.	Under \$7.	Under \$8.	Under \$9.	\$9 and over.
Hosiery.....	5.1	14.6	28.8	48.4	67.8	84.0	94.1	5.9
Underwear.....	2.2	6.0	14.0	26.0	41.3	57.5	73.6	26.4
Sweaters, athletic goods, and miscellaneous products.....	6.1	16.0	31.3	49.4	71.2	81.7	91.8	8.2
Total.....	4.2	11.8	24.0	40.7	59.0	74.3	86.6	13.4

Based on the records of 282 box makers, the report states that the majority averaged between 42 and 50 hours a week. A table showing fluctuation of employment reveals the fact that of the 2,178 women scheduled, only 6.8 per cent worked as much as 12 months, 37.2 per cent worked as much as 11 months, while 86.1 per cent worked only 2 months and 78.7 per cent worked 3 months. It is explained that the greater instability is among the comparatively unskilled and low paid occupations, and also that the figures presented in this connection do not purport to portray the extent of unemployment for the industry as a whole, but merely to give a summary of the pay rolls of the 24 factories studied.

The commission found a tendency for wages in fairly skilled occupations to vary directly with age until middle life is passed. Of 886 for whom records were obtained, 592, or 66.8 per cent, were less than 25 years of age, and of these, 357, or 60.3 per cent, were earning less than \$7 a week. Of the 294 over 25 years of age, 117, or 39.8 per cent, were earning over \$9 a week. A study of the living arrangements of 893 women disclosed that 84.1 per cent were living at home and that of those receiving less than \$6 a week 90.4 per cent were living at home, the percentage decreasing to 77.8 in the case of those who earned \$9 and over. About 48 per cent of the girls living at home were less than 21 years of age, and approximately 72 per cent were less than 25 years of age.

In the hosiery and knit-goods industry it was found that in general the establishments having the largest number of female employees who received average wages of less than \$6 are recorded as having the highest average running time, whereas the establishments paying

the highest wages worked their employees the longest number of hours. The records show a low average for hours of employment, 56.7 per cent working less than 42 hours a week. That the industry is not markedly seasonal in character is shown by the fact that 51.9 per cent had employment for over 9 months in the year; 7.5 per cent of the women included in the study worked the entire 12 months. In the underwear factories, 43.8 per cent worked over 11 months and 61.8 per cent over 9 months. The commission found a general tendency to employ women between the ages of 16 and 35; of the 1,680 women for whom this information was available, 1,390, or 82.7 per cent, were between these ages. As to living conditions of these workers, 10.6 per cent were living away from home; 33.7 per cent of the girls living at home were earning under \$6 a week, while only 24.5 per cent of those away from home were included in these wage groups.

A brief statement of accident hazard, based on the report of the Massachusetts Industrial Accident Board, is included in the bulletin on wages of women in the paper-box factories. The principal danger to which these employees are subjected is connected with machinery peculiar to the industry, particularly the older type of staying machines by which the corners of the boxes are secured. From July 1, 1912, to June 30, 1913, 266 nonfatal accidents (no fatal) were reported, the percentage of accidents to the number employed being 6.3. About 43 per cent of the injured employees were women and the majority were less than 30 years of age. Approximately 62 per cent of those injured were disabled for less than 2 weeks.

Each bulletin gives a brief description of the processes involved in the industry considered.

MINIMUM WAGE IN THE BOX-MAKING INDUSTRY IN GREAT BRITAIN.¹

The Ratan Tata Foundation (University of London) was instituted to promote the study and further the knowledge of methods of preventing and relieving poverty and destitution. To this end it "conducts inquiries into wages and the cost of living, methods of preventing and diminishing unemployment, measures affecting the health and well-being of workers, public and private agencies for the relief of destitution, and kindred matters." Resulting from its study of minimum rate determinations, including the working of the trade boards organized under the trade boards act of 1909, three publications have been issued, the most recent setting out the effect, so far as could be ascertained, of the minimum rates fixed for workers

¹ Minimum Rates in the Box-making Industry, by M. E. Bulkley. Ratan Tata Foundation, University of London. London, 1915. 95 pp.

engaged in the manufacture of paper, cardboard, and chip boxes.¹ This report is based on information collected between March, 1913, and July, 1914, and is the result of personal interviews with some 30 or 40 factory workers, 370 home workers, mostly in London, inspectors and others having knowledge of the working of the trade boards act, and 110 employers in London, Birmingham, Leicestershire, Northamptonshire, Nottingham, Norwich, and in a few other parts of the country, the firms visited covering every branch of the industry, which employs approximately 30,000 persons. The trade board in the box-making industry consists of 19 representatives each of employers and employees, and 3 members of the Board of Trade. Subordinate to this trade board are nine district committees, whose duty is to recommend minimum time rates and minimum piece rates applicable to the trade in their area.

Box making is done by hand and by machinery, in the factory, the workshop, and the home. Most of the employees are pieceworkers,² and piece rates vary considerably from one firm to another. In the fixing of rates two important principles had to be determined: (1) Should there be universal minimum time rates or varying rates according to the different circumstances of different localities, and (2) should general minimum piece rates be fixed or only general minimum time rates. The number of different varieties of boxes was so large and the processes of making them were so numerous and varied so much from one firm to another that it was considered impracticable to fix general minimum piece rates, and the trade board accordingly decided to establish a minimum time rate only. The report suggests that the workers' representatives would have welcomed the fixing of general minimum piece rates, the establishment of which would have greatly simplified the task of administration and reduced the opportunities for evasion of the act. A universal minimum time rate for female workers was finally fixed at 3d. (6.1 cents)³ an hour, which rate became obligatory on September 12, 1912, and a universal minimum time rate for males was fixed at 6d. (12.2 cents), this rate becoming effective on July 7, 1913.

It is provided in the trade boards act, in cases where persons are employed on piecework, and where a minimum time rate, but no general or special minimum piece rate, has been fixed, that "an employer shall * * * be deemed to pay wages at less than the minimum rate * * * unless he shows that the piece rate of

¹ The other two publications are *The Establishment of Minimum Rates in the Chain-making Industry, 1914*, and *The Establishment of Minimum Rates in the Tailoring Industry, 1915*.

² According to the report on earnings and hours of labor in 1906, of the 2,934 women about whom particulars were obtained, 2,052, or 69.9 per cent, were on piecework; of the 1,701 girls under 18 years of age, 645, or 37.9 per cent, were on piecework; of the 1,107 men and boys, all but 3 per cent were on timework.

³ The report states that a "proposal to vary" has been made (May, 1915), by which the rate for adult women is to be 3½d. (6.6 cents) and rates for learners at the later periods are to be altered in accordance.

...in two ways
...the weekly wages
...the improved methods of
...The returns as
...rate, only 108
...the number of per-
...increase in wages,
...to raise piece rates or
...the earnings
...tendency to raise wages

...[54.9 cents] since the act;
...[73 cents]; in a third the
...and now range from 13s. to
...increased all around; whereas
...they now earn from 13s. to
...over 21 years was 11s. [\$2.68],
...they now earn at the rate of
...the northwest of England, out-
...their wages increased when
...from 6d. to 5s. 5d. [12.2 cents to
...about 19 per cent. The weekly wage

bills of two other firms have been increased by 20 per cent and 30 per cent, respectively. In many cases employers have been obliged to refund arrears of wages to their workers. The arrears ordered to be repaid in the nine months from October 1, 1913, to June 30, 1914, amounted to £477 [\$2,321.32].

These details, suggests the report, seem to indicate that the trade board's determination has been of great benefit to the more poorly paid section of women workers. In 1906, for which year figures are available, it is pointed out that about 1,960 women, or approximately 66.8 per cent, were earning less than 13s. 4d. (\$3.24) a week, which is given as the weekly earnings for an average of 53.4 hours, under the minimum rate of 3d. (6.1 cents), thus indicating the probable proportion of workers directly affected by the new rate.

As to wages of female learners it is stated that the trade board's determination had led to a fairly general increase over the whole country. Of 67 firms from whom information was obtained, 40, or 59.7 per cent, had raised the wages of their learners, 21, or 31.3 per cent, had made no change, while in 6, or 9 per cent, the earnings had been reduced.

Owing to the comparatively small number of men and boys in this industry, and also to the fact that the minimum rates had been in effect but for a short period at the time of the inquiry, the data obtained as to increases in their wages is stated to be quite unsatisfactory. Of 68 firms reporting, 26 (38.2 per cent) raised wages, and from all the information collected, together with objections filed by employers when the minimum rate was established, the conclusion is reached that a marked advance in the wages of men, particularly unskilled workers, has resulted. Referring again to the statistics collected in 1906, the report shows that one Bristol firm had been paying far below 6d. (12.2 cents) an hour and that none of its workers therein had received more than 20s. to 25s. (\$4.87 to \$6.08) for a week of 50 hours. Instances are cited where the wages of unskilled male workers, before the minimum rates were fixed, were only 15s. or 16s. (\$3.65 or \$3.89). Based on an average of 53.4 hours a week, 339, or 47 per cent of the 726 men tabulated at that time, were earning less than 26s. 8½d. (\$6.50), which is the weekly earnings at the established minimum rate of 6d. (12.2 cents) an hour.

It appears from the report that minimum rates have not encouraged organization among workers. The indirect effect of these new rates upon wages is indicated by the action of one firm which posted a notice stating that any advance in such of the rates as were below the trade-board minimum would be followed by a reduction in the rates which were above it. As to the effect upon conditions of labor it is pointed out that in some cases the hours have been reduced, while a frequent result has been the readjustment of the work so as to avoid waste of time. Greater application and greater

punctuality seem to be insisted upon and methods of speeding up of workers instead of raising piece rates appear to have been resorted to in some instances.

One of the arguments advanced against the establishment of the minimum wage was that the increased cost of production consequent on a larger wage bill would naturally lead to a rise in prices, which would inevitably restrict the demand. It is explained that a general rise in the cost of boxes during the last few years has been due almost entirely to causes not connected with the trade board, that an increased wage bill does not necessarily mean an increase in the cost of production, that the necessity of paying higher wages has led employers to make closer scrutiny of their business in order to effect economies through training of workers, organization, and machinery, and that the falling off in the demand has come about more through foreign competition than because of a rise in the prices of boxes.

In discussing the effect of minimum rates on employment, the report notes a tendency to dispense with the services of learners, to dismiss some of the less efficient adults, and to reduce the number of home workers. Although the figures collected by the trade board in the spring of 1914, showing length of service of female learners who left the box-making industry, either by their own volition or because they were dismissed, between March, 1912, and May, 1914, indicate that 67 per cent had been in the trade for less than one year and 80 per cent for less than 18 months, the report suggests that the number of dismissals can not be large since the total number of learners in the trade increased during the period mentioned from 7,972 to 9,065, or 13.7 per cent. A reduction in the number of male learners aged 18 to 21 years is indicated. As to the dismissal of adults information was received from 96 firms employing 6,800 female workers. Of these firms only 32 reported that they had dismissed any of their women, the number affected being not more than 300, or about 4.4 per cent. Several instances are given of large proportions of workers being dismissed, but it is believed that the establishment of minimum rates has not led to any large displacement of female labor. Owing to the sudden rise in the rate to be paid boys at the age of 21, it appears that many upon attaining that age have been dismissed, although out of 88 firms employing about 900 men, only 5 stated that they had discharged any, and that the number affected was not more than 2 per cent. Admitting that a certain number of adult workers have been dismissed, the report asserts that unemployment on a serious scale, as a result of minimum rates, has not taken place and is not likely to take place in the future.

To a considerable extent box making is done by home workers, the number so engaged being approximately 2,000, confined mostly to London and Birmingham. Of 1,579 such employees in London on March 31, 1914, only 1 was a male. The minimum rate established by the trade board does not appear to have affected materially the fancy-box makers, but has meant a very considerable rise in the earnings of match-box makers. About 33 per cent of the 330 home workers interviewed in London were more than 45 years of age, and 78.2 per cent were married. Of 291, 29.9 per cent were entirely dependent on their own earnings, and approximately 35 per cent were partly dependent on their own work. The difficulty of finding out how many hours the home worker works and of deciding whether or not she may be classed as an "ordinary" worker is suggested as a factor which makes the enforcement of the payment of a minimum time rate extremely hard. It was found that as to 330 workers about whom information was obtained, all piece rates had been raised in 143 instances (43.3 per cent), while in 93 cases (28.2 per cent) no change is noted. Although this would indicate that a large proportion had benefited by the trade board's determination, it is pointed out that the benefit may be considered only apparent, since of 300 workers, 126, or 42 per cent, even though piece rates had been raised, were not able to earn the minimum time rate, while 39 others, or 13 per cent, were able to earn it only on some kinds of work. It is believed, however, that although the trade board's determination can not yet be said to be universally observed, there is no doubt that it has caused a very considerable increase in the earnings of home workers. In fact, it is stated that 50 per cent of those who gave information had had their piece rates raised on all kinds of boxes, and another 16 per cent had experienced a rise in rates on some kinds of work; the match-box makers had all had their rates raised. Against this must be set a slight contraction of employment more especially in the case of match-box makers, but this is due, it is believed, only in a small measure to the fixing of a minimum wage. A table is presented showing that the number of home workers employed by firms in London and Birmingham making complete returns, on March 31, 1914, was 28.4 per cent less than the number so employed on March 31, 1912, while the number of indoor female workers increased 5.9 per cent in the 2-year period, indicating a tendency to require more work to be done in the factory.

The report suggests the difficulty of administering the minimum rate provision of the trade boards act owing to the fact that the industry is so widely scattered and includes many types of organizations, from large factories to small workshops. It is stated that 90 per cent of the home workers interviewed had never been visited by

an inspector and some had never heard of the trade board. The main difficulty of administration is the absence of minimum piece lists, thus making it hard for an inspector with only a minimum time rate fixed to determine whether the piece rates paid by an employer are such as to yield the minimum time rate to the "ordinary worker." A certain amount of evasion of the board's determinations is suggested, more particularly among smaller employers and employers of home workers. Of 336 visited it was found that irregularities existed to a greater or less degree in 205 places (61 per cent). Only two prosecutions have been undertaken in this industry since the minimum rates were fixed. To render the enforcement of minimum rates more effective it is suggested that the staff of inspectors be greatly increased, that the work be decentralized and district offices established, and that the term "ordinary workers" should be defined with greater precision.

The final chapter is a summary and conclusions and briefly sets forth the findings as to minimum rates, as follows:

1. **Women's wages.**—According to the report of the board of trade on earnings and hours of labor in 1906, some 67 per cent of the women employed in making boxes of cardboard, etc., were earning less than 3d. [6.1 cents] an hour. Probably there was little, if any, increase in wages between this date and the fixing of the minimum rates. As the trade board has laid down that at least 85 per cent of the workers in any factory ought now to earn not less than this amount, it would appear that some 52 per cent of the workers must have experienced an increase of wages, provided that the trade board's determination is being observed. The increase has not taken place equally all over the country. * * * In a few cases where piece rates have been readjusted some rates have been cut down and occasionally timework has been substituted for piecework; but there is no general tendency for the minimum to become the maximum. On the contrary, the more highly paid workers have often demanded an increase to correspond with the rise granted to the worse paid, and when piece rates are raised the quicker workers naturally gain as well as the slower.

2. **Men's wages.**—It would seem that the trade board's determination has made little difference to the skilled men. But a large proportion of the men employed in box making are engaged on unskilled work, and these were, before the fixing of the minimum rate, in many instances being paid at rates far below 6d. [12.2 cents] an hour.

3. **Learner's wages.**—The minimum rates fixed for learners have led to a fairly general increase over the whole country in the wages paid to girls. Young boys under 18 have been little affected, but the wages of youths of from 18 to 20 have often had to be raised.

4. **Trade-unionism.**—The establishment of the trade board gave at first a great impetus to the voluntary organization of the workers, and numbers of women joined a trade-union. This increased membership, however, has not been maintained.

5. **Conditions of employment.**—The trade board has led employers to organize their work more carefully, so that there is less waste of time. The workers are now less often kept waiting for work. In a few cases hours have been reduced. On the other hand, supervision is stricter and greater punctuality is insisted on. In some cases employers have driven their workers to earn the minimum on inadequate piece rates by excessive speeding up.

6. **Prices.**—There has in the last two or three years been a rise in the price of boxes. But it has been due principally to the cost of raw materials and can be attributed to only a very small extent to the trade board.

7. Effect of the minimum rates on the industry.—Certain branches of the trade, particularly the manufacture of some kinds of match boxes, appear to have suffered from increased foreign competition. On the other hand, the advance in wages has led in many cases to an increased output on the part of the workers and to closer attention on the part of the employers to questions of training, organization, and machinery. These changes together have tended to keep down the cost of production.

8. Employment.—There has been a tendency to dispense with the services of learners, and to dismiss some of the less efficient adult workers, as a result of the minimum rates. There is no sign, however, of unemployment on a serious scale having taken place or being likely to take place. Many of the women who lost their work when the minimum rates were fixed were later taken on by other firms.

9. Home work.—Of 287 home workers who gave information, 50 per cent had had their piece rates raised on all kinds of boxes that they made, and another 16 per cent had experienced a rise in the rates on some kinds of work. A considerable number appear still to be unable to earn the minimum. Of those questioned on this point, 42 per cent stated that they could not earn 3d. [6.1 cents] an hour, while another 13 per cent could only earn it on some kinds of work. There has been a slight decrease in the number of home workers employed, owing partly to the trade board, but partly also, and probably to a greater extent, to the insurance act and to the increasing use of machinery which has been taking place for some years, irrespective of the establishment of a minimum wage. This decline of home work is seen especially in the case of the common match-box makers; with regard to other box makers the change has been more gradual.

10. Administration.—There is a certain amount of evasion of the trade board's determinations, more particularly among the smaller employers and those who employ home workers. This is mainly due to the inadequacy of the staff of investigating officers.

EMPLOYMENT OF WOMEN IN MUNITIONS MAKING IN FRANCE.¹

This report, issued under the direction of the ministry of munitions, Great Britain, covers the findings of the mission appointed to visit the industrial district in France to ascertain "the causes which have contributed to the enormous increase which has taken place in the production of munitions in that country, notwithstanding that one-eighth of the country and five-eighths of the former metallurgical productivity are in the hands of the enemy." In December, 1915, the mission visited 23 establishments engaged in the production of munitions and found three factors contributing to the increased output: (1) Increasing intensity of production; (2) erection and equipment of new factories and extension of existing munition factories; and (3) adaptation of existing factories to the manufacture of munitions.

As to increasing intensity of production it was found that women as well as men are working "with a good will which is most impressive"; that "the men have apparently welcomed the introduction of women into the factories and are doing everything they can to instruct

¹ Great Britain. Ministry of Munitions. Report by mission appointed by the director general of recruiting for munitions work on the output of munitions in France. London, 1916. 8 pp.

and cooperate with them in increasing the output of munitions," and that "this feature is important and is worthy of careful notice in view of the fact that not only have the women been introduced for the purpose of increasing the supply of labor but also of freeing the men for service in the army." The erection and equipment of new factories entirely by private enterprise and not subsidized by the Government is noted, and the mission comments upon the success which has apparently attended the efforts of a number of employers who have abandoned their normal manufacture and adapted their machinery for the output of munitions. One feature of the French system noted by the mission is the fostering of the small producer—of whom there are about 1,800 in the Paris district—for machine operations, these subcontractors receiving the same price for their output as the main contractor receives from the Government. Practically all the factories run night and day shifts; in some cases three shifts are operated. In most cases the shifts change over every fortnight, and on the change the workpeople get 24 hours off. The hours of work on Saturdays are the same as on other days, and on Sunday no work is done in the afternoon in some cases.

As a rule the women work the same hours as the men, but up to the time of the investigation very few had been employed on night shifts. The only processes confined to men were found to be setting up and tool making, although a few instances were noted where women were actually grinding the edges of cutting tools for machines. The production on the night shift appears to be equal to that on the day shift. In some cases it is better, owing, it is suggested, to there being less interruptions at night.

Specialization of output, or at least a small range of products, in most factories is given as a consideration which has made the employment of unskilled male and female labor satisfactory, because the repetitive nature of the work is increased and the tool room and inspection work is proportionately decreased. The opinion in the French factories seems to be that the output of females on small work equals and in some cases excels that of men, and that in the case of heavier work, within certain limitations, women are of practically the same value as men. Nearly all the work, except tool-room work, setting up and floor laboring, is done on piece, and it is stated that the premium bonus system is not known. In the case of women there does not appear to be any recognized time rate other than that paid during the period of training; these rates are usually recognized as guaranteed minimum rates. The same piece rates are paid to women as to men. Apparently no arrangements are made by the Government for technical instruction of unskilled men or of women, this work being done in each factory. It was found that the introduction of unskilled male and female labor has not presented the difficulties

experienced in England, and it was ascertained from representatives of the trade-union movement in France that trade-union conditions as regards wages and labor have been practically suspended. No recognized system of apprenticeship seems to exist in France, except in the higher branches of the engineering trade. Labor seems to be specialized and workpeople are permitted to specialize in more skilled operations as they show ability.

The committee suggests that a remarkable feature in the French factories is the almost entire absence of lost time, not exceeding on the average 1 per cent of the total time. The usual penalty for lost time in the case of civilians is a reprimand for the first offense; in some cases a fine for the second offense, but generally the workman is dismissed. Military workers, of whom there are a large number, are dealt with under military law.

No applications for general advance in wages have been made by the workpeople since the commencement of the war, and no strikes have occurred.

The mission found no evidence of industrial fatigue due to long hours either on day or night shifts. The extent to which owners of factories have been able to import machinery available for munitions work from the United States, Great Britain, and Switzerland, much impressed the mission. The general conclusions at which the mission arrived are:

1. The people of France realize that they are at war.
2. The one idea in the mind of all is to bring the war to a successful issue.
3. The spirit which dominates the nation has prevented difficulties arising in the manufacture of war material.
4. Loss of time is practically negligible.
5. No trade-union restrictions exist at the moment.
6. Everything is done to increase production.
7. No limitation of profits exists and no question in this respect has been raised by the workpeople.
8. The manner in which the employers in France have been able to acquire machinery and the initiative and energy displayed by them are beyond all praise.
9. In conclusion, it appears to the mission that the increase of production in France is due to one cause and one only, and that is the patriotic enthusiasm which exists there.

Appendixes to the pamphlet contain a representative list of operations undertaken by female labor in munition factories and a statement showing the present and former occupations of women employed in one munition factory. These appendixes are as follows:

Representative list of operations undertaken by female labor in munition factories in France.

(a) Hand operations.

- Assembling.
- Bogey running.
- Brazing water jackets of motors.
- Cartridge (rifle), complete.

(a) Hand operations—Concluded.

Checking.

Compressing powder in rings on time fuses.

Core making.

Filing.

Filling shrapnel with resin and bullets.

General survey, for information of management, of quality of articles made.

Gauging shell, cartridge cases, fuses, rifle cartridges, etc.

Loading rifle cartridges.

Making up powder charges in bags.

Molding (sand).

Oxyacetylene welding.

Screwing on shrapnel caps.

Setting up.

Sights:

Filing and finishing.

Finishing and assembling optical work.

Soldering (electric iron).

Sound testing of shell.

Testing fuse taps.

Water-pressure testing of shell.

(b) Machine operations.

Boring, including finish boring of shell.

Centering.

Chamfering.

Cleveland machines—four bars (one woman working two machines).

Drilling.

Grinding:

General.

Turning tools (jigs supplied).

Lathes:

Center—power and hand.

Shell—four tools on one rest and base faced by tool on back rest, all on one operation.

Shell—two tools on one rest.

Rifle barrels—two tools on two rests.

Turning copper bands.

Finishing shell—back and front rest and former—hand filing for finishing to gauge (one operation).

Shell—combination boring.

Fuse bodies filed on lathes to make them concentric with thread.

Machines—two and three worked by a woman according to length of operation.

Milling—hand fed—in some cases not straight work.

Thread-milling machine for case and shell.

Narling recess for copper bands.

Painting shell.

Recessing for copper bands.

Rectification of shell (machine).

Rifle barrels:

Boring—one woman working two boring machines, two barrels to each machine.

Turning, two tools—two rests.

Milling, except milling for foresight.

Stamping studs—hot metal.

(c) Special instances of complete manufacture.

75 mm. shell, complete.

120 mm. shell, complete.

Fuses, complete.

Rifle cartridges, complete, including loading, but not loading of caps.

**STATEMENT SHOWING PRESENT AND FORMER OCCUPATIONS OF WOMEN EMPLOYED
IN ONE OF THE MUNITION FACTORIES IN FRANCE.**

Department.	Num- ber of work- women.	Occupation in factory.	Former occupation.
Boring.....	41	Vertical boring.....	15 housewives; 1 corsetière; 20 factory girls; 4 mechanics; 1 florist.
Hardening.....	39	30 inspectors; 9 laborers.....	29 housewives; 1 shirt maker; 1 cutter out; 1 domestic; 1 clerk; 6 factory girls.
Finishing.....	337	337 turners.....	30 dressmakers; 30 children's nurses; 1 hospital nurse; 36 domestics; 6 lacemakers; 68 housewives; 46 clerks; 120 factory girls.
Inspection room....	255	255 inspectors.....	56 housewives; 60 dressmakers; 4 shorthand writers; 40 clerks; 14 embroiderers; 30 breeches makers; 4 florists; 27 no occupation; 20 factory girls.
General inspection..	209	209 inspectors.....	67 housewives; 4 domestics; 3 artists; 2 hair-dressers; 2 cashiers; 4 florists; 4 embroiderers; 18 dressmakers; 8 typists; 2 school-mistresses; 15 children's nurses; 20 clerks; 60 factory girls.
Fuses.....	848	110 drillers; 70 turners; 55 correctors; 45 dressers; 45 setters up; 40 greasers; 35 markers; 30 screw t a p makers; 30 inspectors; 363 gaugers; 25 various.	470 breeches makers, seamstresses, and milliners; 125 clerks; 125 housewives; 53 no profession; 75 factory girls.
Gaines.....	158	62 inspectors; 40 turners; 56 laborers.	30 dressmakers; 6 furniture polishers; 10 florists; 4 bread carriers; 16 children's nurses; 10 weavers; 40 housewives; 16 tulle makers; 16 cardboard-box makers; 10 factory girls.

The average earnings of the workers in munition factories, based upon the mean of the earnings in each factory without regard to the proportion of the workpeople employed at the various rates in each shop, are as follows:

The average earnings per day of male workers in the munition factories in France were found to be as follows: Laborers, \$1.16; machine men, \$2.01; skilled, \$2.36.

The minimum daily wage for female workers was 68 cents; their average daily wage was \$1.15.

LABOR CONDITIONS IN MUNITIONS MAKING IN GREAT BRITAIN.¹

Two features of the reports recently issued by the British health of munition workers committee are of more than ordinary interest to labor. These are the extensive employment of women, many of

¹ Great Britain. Ministry of Munitions. Health of munition workers committee. Memorandum No. 4, Employment of women; Memorandum No. 5, Hours of work; Memorandum No. 6, Canteen construction and equipment; Memorandum No. 7, Industrial fatigue and its causes; Memorandum No. 8, Special industrial diseases; Memorandum No. 9, Ventilation and lighting of munition factories and workshops; Memorandum No. 10, Sickness and injury. London, 1916. 7 pamphlets. 49 pp.

them new to wage-earning employments, in occupations in which women have never before been employed, and the emphatic conclusion of the committee that overtime work, when measured in terms of output, does not pay and can not be made to pay for any considerable period even with the best cooperation on the part of the employees. The committee's conclusions are worthy of greater consideration because of the high qualifications of the members for the task to which they were assigned. The committee consists of Sir George Newman, M. D., chairman; Sir Thomas Barlow, Bart., K. C. V. O., F. R. S., M. D.; G. Bellhouse, factory department, Home Office; Prof. A. E. Boycott, M. D., F. R. S.; J. R. Clynes, M. P.; E. L. Collis, M. B., factory department, Home Office; W. M. Fletcher, M. D., F. R. S., secretary of medical research committee; Leonard E. Hill, M. B., F. R. S.; Samuel Osborn, J. P., Sheffield; Miss R. E. Squire, factory department, Home Office; Mrs. H. J. Tennant; E. H. Pelham, secretary.

The committee was appointed by the British ministry of munitions to make a careful study of hours of labor and working conditions in munition factories in order, if possible, to consider and adopt measures for developing physical efficiency to a point productive of the best possible output.

In the May number of the REVIEW three memoranda prepared by the committee were summarized—Sunday labor, welfare supervision, and industrial canteens.¹ Attention is here directed to further reports issued by this committee in January and February, 1916, including employment of women, hours of labor, industrial fatigue and its causes, ventilation and lighting of munition factories and workshops, special industrial diseases, sickness and injury, and canteen construction and equipment.

EMPLOYMENT OF WOMEN.

In its study of employment of women in munition factories the committee considered five matters which, apart from questions of wages, concern the health and industrial output of the workers: (1) the period of employment (including nightwork, length of hours, overtime, etc.); (2) rest pauses and provisions of meals; (3) sanitary conditions of the factory; (4) physical condition of women workers; and (5) questions of management and supervision. Recognizing that the night employment of women in factories, after almost a century of disuse, has of necessity been revived by the war, the committee directed its efforts to the consideration of those safeguards which would reduce its risks to the minimum. Evidence of the merits of continuous work as against weekly, fortnightly, or monthly change

¹ Monthly Review of the United States Bureau of Labor Statistics for May, pp. 66-70.

of shifts being somewhat conflicting, the committee concluded that the matter is one which must be largely dealt with locally on social considerations. It was stated by some managers and foremen that the last few hours of a 12-hour night shift yield little output, and inspection by the committee indicated the relative failure of these hours. It would seem that the employment of women at night calls for particular care and supervision and that adequate pauses for rest and meals are indispensable. Conditions of housing and of transit to and from work are mentioned as contributing to the fatigue of the workers, for "where home conditions are bad, as they frequently are, where a long working day is aggravated by long hours of traveling, and where, in addition, housing accommodation is inadequate, family life is defaced beyond recognition." In the opinion of the committee there should be in the matter of hours of labor for women little conflict between the interests of the home and the interests of munitions, for the hours which conduce most to a satisfactory home life and to health conduce most to output. Long hours, particularly when they are worked during the night, are perhaps the chief factors in fatigue, and the committee thinks that in the interest of output and health alike they should be restricted within proper limits, that there should be suitable pauses for rest during the working period, and that there should be adequate cessation from work at each week end in addition to periodic holidays.

The three systems of employment most commonly adopted for women in munition factories were found to be (1) one shift of 13-14 hours (the overtime system), (2) two shifts of 12 hours, and (3) three shifts of 8 hours. The last system appears to yield the best results in the long run, for "the strain of nightwork, indeed strain generally, is sensibly diminished, greater vigor and work is maintained throughout the shift, less time is lost by unpunctuality or illness, and there is less liability to accident." The flagging output which appears to characterize the last hours of a 12-hour night shift seems similarly characteristic of the last hours of overtime during the day, and it is stated that the disadvantages of the overtime system are being increasingly recognized by employers. This seems to have been forced upon some by the resultant fatigue, illness, and bad time-keeping (failure to work full time) of the workers, and upon others by some accidental shortening of the day which has shown that the loss of hours has carried with it no diminution in output. The committee recommends the adoption of the three-shift system, without overtime, wherever a sufficient supply of labor is available.

Declaring that pauses, well distributed and adapted in length to the needs of women workers, are of the highest value in averting breakdown and in giving an impetus to output, the committee is of

the opinion that a portion of Saturday and the whole of Sunday should be available for rest, and that the periodic factory holiday should not, on any account, be omitted. The advantages of well-managed industrial canteens in convenient proximity to workshops are emphasized, and facilities, especially during the night, for rest in cases of fainting and other temporary illness are urged. Considerable importance is attached to the necessity of maintaining the sanitary condition of the factory, including adequate wash rooms and toilet facilities, for "the effect upon the health and energy of women and girls which results from clean, bright, and airy work-rooms, well warmed in winter, can hardly be exaggerated. Cleanliness and good order contribute to increased output as well as to the discipline and morale of the factory." The committee believes that the nature of a woman's work should be determined with due regard to its effect on her immediate and future health, and suggests that inattention in this regard may cause, or at least accentuate, certain ailments and forms of physical disability to which women are liable, among which are noted (1) disturbances of digestion, (2) anemia, (3) headaches, (4) nervous exhaustion, (5) muscular pain and weakness, flat-foot, etc., (6) derangement of special physiological functions. With a view to the detection of minor ailments and incipient or actual disease, provision for the examination by a medical woman of all applicants for employment is recommended.

The committee received abundant evidence of the necessity of wise and suitable arrangements for the management and supervision of women's labor, leading it to conclude that there is hardly a condition of greater importance than this in respect both of smooth working and of maximum output. It is therefore recommended that in all cases where women are employed consideration be given by the management to the appointment of forewomen, nurses, and welfare supervisors whose position and status should be properly assured and whose duties should be prescribed. In conclusion the committee suggests that—

If the present long hours, the lack of helpful and sympathetic oversight, the inability to obtain good, wholesome food, and the great difficulties of traveling are allowed to continue, it will be impracticable to secure or maintain for an extended period the high maximum output of which women are undoubtedly capable. The committee recognize that emergency conditions must obtain in many cases, but they are satisfied that every effort should be made to organize women's labor effectively and promptly. It may be that in the entanglement of problems new and old the coming of the new and their imperative claim for solution will help the solving of the old. * * * There is need for the work of women in industry; there is need also for safeguarding that service. Happily there is manifest a public spirit and a devotion able to overcome difficulties and solve problems. There is also a fuller recognition of the claims of women and of their children and of their vital importance to the State, which is reward for the sacrifice and courage of those women now working steadfastly in the ranks of labor.

HOURS OF WORK.

In the preparation of the memorandum on hours of work in munition factories, the committee seemed to be influenced by consideration of what is immediately practicable regarding the health of the worker in relation to a maximum output, in view of exceptional conditions entailed by the war. It is suggested that an increased number of hours may be obtained by overtime or by a system of shifts and that the committee greatly prefers the latter, although recognizing that it is impracticable to establish shifts universally. It is noted that as the most highly skilled workers (tool and gauge makers, tool setters, etc.) are the most difficult to obtain, they have been most generally employed on overtime, and it is believed that the shift system should be extended to this branch of industry as rapidly as possible. Briefly stated, the objections presented to overtime are: (1) It is liable to impose too severe a strain upon the workers, which adversely affects the rate of production and quality of output during the whole period of work as well as during the hours of overtime; (2) it frequently results in a large amount of lost time, which is attributed to workers becoming exhausted and taking a rest, and also to sickness; (3) it imposes a very serious strain upon the management, the executive staff, and foremen, since they can not take days off, like the ordinary worker; (4) it is liable to curtail unduly the period of rest and sleep available for those who have to travel long distances to and from their work, a matter of special importance in the case of young persons; (5) the fatigue entailed increases the temptation to men to indulge in the consumption of alcohol. Although the committee found no evidence of any serious breakdown among workers as a result of the strain of long hours, it is satisfied "that if men are asked to work for 15 hours a day for weeks and months on end (as is the case now in certain areas) one of two results must follow; either the health of the workers will break down or they will not work at full pressure. In either case output must suffer."

Admitting that overtime must continue, definite restrictions to govern it are suggested. For adult male workers the committee recommends:

1. The average weekly hours (exclusive of meals) should not exceed 65 to 67, including overtime. Hours in excess of 65 should only be worked for short periods and to meet sudden and unexpected circumstances. It may be desirable to differentiate to some extent between different kinds of work, and to fix a rather lower limit of hours for work requiring close individual attention.

2. Where practicable, the overtime should be concentrated within three or four days in the week, which should preferably not be consecutive.

3. Where overtime is worked, it is specially important that there should be no Sunday work.

4. The practice prevailing in certain districts of working from Friday morning, all through Friday night, and until noon on Saturday should be discontinued. Such hours may be permissible for short spells, but can not be satisfactory from the point of view either of health or output if continued for indefinite periods.

As respects women, the committee expresses the belief that the strain of long hours is serious and that conditions of work in excess of the normal legal limit of 60 hours a week ought to be discontinued as soon as practicable, although little objection is seen to such moderate overtime during the week as can be compensated for by an earlier stop on Saturdays. The committee feels that the need for overtime among women and girls is much less pressing than it is for men, and that wherever practicable the system should be abandoned in favor of shifts. Although it is recommended that boys should be allowed to be employed on overtime up to the maximum suggested for men, it is thought that every effort should be made not to work boys under 16 more than 60 hours a week.

The reasons which actuated the committee in announcing a preference for shifts are that they involve less strain on foremen and workers, enable the machinery to be used the whole 24 hours, and produce a better and more uniform rate of output. Under the 8-hour shifts system these benefits seem to be emphasized, and it is therefore preferred to the double-shift system. However, it is admitted that a shortage of workmen and the difficulty of supervision, as well as the problems of housing and transit, to a large extent exclude the 8-hour shifts from practical consideration so far as male workers are concerned. Most of these workers are employed on double shifts and the committee sees no reason to suggest a change. The employment of women on 8-hour shifts was found to be increasingly common; the 12-hour shift for women is deplored. No change is suggested for the boys who are, like the men, employed generally on 12-hour shifts. Although work on shifts involves nightwork, the committee makes it clear that nightwork is not to be regarded as a good thing in itself, and offers the following objections to the system:

1. It is uneconomical. Though wages are paid at a higher rate, the rate of output, more particularly during the last two or three hours of the 12-hour shift, is generally lower.
2. Supervision is frequently unsatisfactory.
3. Conditions of lighting are seldom so good as in daytime, and make fine work more difficult.
4. Workers experience great difficulty in sleeping by day.
5. The unfamiliar meal hour makes it difficult for the workers to consume substantial food, and their digestion is liable to become deranged.

The committee was unable to arrive at any definite conclusion as to how long the workers should remain on the night shift at any one time, the evidence indicating reasons for fortnightly and monthly

changes as well as continuous service. As suggested in the discussion on employment of women, it is believed that much is to be said for infrequent changes, but that the matter must be settled locally, largely on social considerations, and should be left to individual employers to determine in consultation with their workpeople. Existing arrangements for spells and breaks in the work were found to be generally satisfactory, but the committee considers it most important that the ordinary factory holidays should not be interfered with.

INDUSTRIAL FATIGUE AND ITS CAUSES.

In the pamphlet on industrial fatigue and its causes, fatigue is defined as the sum of the results of activity which show themselves in diminished capacity for doing work. The performance of work, it is pointed out, depends upon the activities of the complex nervous mechanisms of the brain and spinal cord which are concerned in the initiation and distribution of impulses to action; second, the nerves which conduct the impulses to the muscles; and third, the muscles themselves, which by contracting finally perform external work. The problems of industrial fatigue, it is stated, are primarily and almost wholly problems of fatigue in the nervous system and of its direct and indirect effects. The committee discusses the necessary time relation between an action and the rest needed for complete repair. "For every acting element a given rhythm of activity will allow exact recovery after each act, and will maintain the balance between action and repair throughout a long series." Thus, after explaining that bodily fatigue is primarily nervous fatigue, the committee asserts that "for work in which severe muscular effort is required it seems probable that the maximum output over the day's work and the best conditions for the workers' comfort and maintained health will be secured by giving short spells of strenuous activity broken by longer spells of rest, the time ratio of rest to action being here, for maximal efficiency, greater than that for the employments in which nervous activity is more prominent or more complicated than in the processes involved during familiar muscular work." As an illustration of this it is stated that two officers at the front recently, for a friendly wager, competed in making equal lengths of a certain trench, each with an equal squad of men. One let his men work as they pleased, but as hard as possible. The other divided his men into three sets, to work in rotation, each set digging their hardest for 5 minutes and then resting for 10, till their spell of labor came again. The latter team won easily.

For practical purposes in industrial management two chief characters of nervous fatigue must be observed. First, during the continued performance of work the objective results of nervous fatigue precede in their onset the subjective symptoms of fatigue. Without obvious sign and without his knowing it himself a man's capacity

for work may diminish owing to his unrecognized fatigue. His time beyond a certain point then begins to be uneconomically spent, and it is for scientific management to determine this point and to determine further the arrangement of periods of rest in relation to spells of work that will give the best development over the day and the year of the worker's capacity. Second, the results of fatigue which advances beyond physiological limits ("overstrain") not only reduce capacity at the moment, but do damage of a more permanent kind which will affect capacity for periods far beyond the next normal period of rest. It will plainly be uneconomical to allow this damage to be done.

For these reasons, chief among others, it will be important to detect latent fatigue, and since sensations of fatigue are unpunctual and untrustworthy, means must be sought of observing the onset of fatigue objectively.

The committee declares that the true sign of fatigue is diminished capacity and that measurement of output in work will give the most direct test of fatigue. The direct and injurious effect of fatigue upon output is suggested. In indicating the methods for measuring output, the committee emphasizes the importance of carrying on experiments under the ordinary conditions of the work, unknown to the workers, and with proper allowance for variable factors. They should be extended over successive short periods and over long periods to show the onset of fatigue over the whole day or the whole week and under particular seasonal or other conditions in order to detect and measure the results of accumulating fatigue. Measurements of output must also be recorded at so much for each individual or each unit group.

In addition to this direct measurement certain secondary symptoms are indicated. Thus, one important sign of fatigue in the nervous centers appears to be a want of coordination and failure in the power of concentration, finding expression in an increased frequency of trifling accidents and spoiled work. The sickness returns and the returns of lost time are other indications of the effects of fatigue in munition factories. Many workers were found to complain of feeling "done up," and the evidence seems to show that this state of "staleness" is becoming increasingly common and obvious. This is attributed almost wholly to persistent long hours and the deprivation of weekly rest.

Proper attention earlier in the war to the need for weekly rest would have prevented a large part of the diminished capacity of this kind that has been allowed to appear, and would have averted much costly and wasteful expenditure upon imperfect work. But stress must be laid here on a further point. For the avoidance of staleness in conditions of strenuous labor it is not enough to treat workmen in the bulk and to regulate daily and weekly rests upon a physiological basis devised for the average. If that be done, widespread evils like those too commonly present now may be avoided, but good management will consider always the individual workman as well. The committee have no doubt that in very many cases, perhaps in almost all, in which staleness is well marked or has even advanced to definite sickness, a single "day off," given occasionally at the right time, would have avoided much wasteful reduction of capacity and in the worst cases the total loss of many days of work.

One of several examples cited in the report, showing intelligent management and emphasizing the importance of regular rest periods, may be given:

At another large munitions factory men engaged in the heavy work of molding are required by the management to rest 15 minutes in every hour of work. The manager was satisfied that this was an arrangement good for the men and for the output. But the men objected to this long spell of rest in each hour because the work was piece-work and they thought the production would be lessened by it. The manager accordingly found it necessary to set a foreman to watch and to make the hourly rest compulsory. When this was done the output per hour was found to be actually increased.

Taking the country as a whole, the committee feels that the munition workers in general have been allowed to reach a state of reduced efficiency and lowered health which might have been avoided without reduction in output by attention to the details of daily and weekly rests.

VENTILATION AND LIGHTING OF MUNITION FACTORIES AND WORKSHOPS.

The inquiries of the committee led it to believe that the attention paid to ventilation and heating in the majority of workshops is insufficient, and that the means of securing them are in consequence ill-directed or altogether neglected. At the present time the importance of proper and effective methods of ventilation would seem to be intensified not only by the increase in number of workers but by the continuous occupation of shops by day and night, thus allowing no interval in which natural ventilation can restore a vitiated atmosphere, so that each shift must succeed to the bad conditions left by its predecessor. It is declared that the object which ventilation seeks to secure is two-fold: (1) The removal of foul, exhausted, or polluted air, and (2) the supplying of air which is pure and clean. The impurities which are liable to be added to the air inside the workshop are: (1) Carbonic-acid gas given off in the breath of human beings and by fires, gas lights, or any other form of open combustion; (2) various ill-defined volatile substances arising from human beings, from the skin and alimentary canal, especially when personal cleanliness is absent and sweating profuse; (3) bacteria coming from human beings, forming a more definite and more directly harmful sort of impurity; and (4) industrial processes giving rise to dust, fumes, etc. Although small crowded shops require more flushing of outside air than large sheds with few persons in them, it is asserted that the conclusion that a workshop with a large cubic capacity in relation to the number of workpeople does not require any definite ventilation is wholly false. Laboratory experiments have indicated that the desirable atmosphere is characterized by being cool rather than hot, dry rather than damp, diverse in its temperature in different parts and at different times

rather than uniform and monotonous, and (which is intimately connected with this diversity) moving rather than still. Because of the close connection between temperature and the stimulating factors of an atmosphere, the committee believes that the question of warmth and cold in workshops must receive attention. "For a shop to be too hot is a disadvantage from every point of view, but the stimulation of too cold an air may be more than counterbalanced by the physical depression which results, and it is not difficult in cold weather for efficiency to deteriorate because the worker becomes uncomfortably chilled." To indicate what temperature should be maintained in a factory is thought to be undesirable, since it depends largely upon variations in the character of the work and the habits of the workers. It is, however, suggested that where the air is stagnant the temperature should not exceed 60° F., although it may be somewhat higher where the air is kept in motion.

The committee suggests that it is of the utmost importance that those responsible for planning the means of ventilation of any building should realize that each workshop provides separate problems and that there is no uniform and stereotyped method which will give satisfactory results everywhere. Three means by which satisfactory natural ventilation is to be obtained are indicated in the report:

1. Local sources of impurity and heat production should be dealt with by the provision of hoods, exhausts, flues, etc.; smoke and fumes from neighboring workshops and chimneys may require attention. Workers should be so arranged in relation to each other that they do not cough and sneeze in one another's faces.

2. Definite openings communicating with the outside air should be provided in every workshop, and the committee would again emphasize the fact that the largest shop requires some system of ventilation. The form and nature of such openings can not be defined in a general way, but it appears to the committee that the average machine shop and all similar one-story shops should be provided with louvers along the roof ridges and in many cases also with narrow openings where the roof meets the walls. Such louvers should be permanently open, and will generally insure that the atmosphere will at least not be grossly bad.

3. Such fixed openings do not, however, allow of the flexibility required to meet varying internal and external conditions, and should be supplemented by the use of doors, windows (which will open), and fans. Fans are especially valuable to meet emergencies and abnormal conditions, and provide for a thorough cleaning of the air during meal times.

As to the means of heating shops, the committee found that the ideal form is by radiant heat, but suggests that the most complete installation for ventilation and heat may be rendered ineffective by injudicious management or failure in proper and continuous maintenance. Rapid changes of climate, different times of day, varying circumstances of use and occupation, all require appropriate treatment.

The essentials of good lighting¹ are stated to be—

1. Adequacy.
2. A reasonable degree of constancy and uniformity of illumination over the necessary area of work.
3. The placing or shading of lamps so that light from them does not fall directly on the eyes of an operator when engaged on his work or when looking horizontally across the workroom.
4. The placing of lights so as to avoid the casting of extraneous shadows on the work.

The committee is of the opinion that natural lighting is to be preferred to artificial lighting on the ground of health as well as economy, and that roof lighting is better than lateral lighting. The importance of the question of artificial lighting, in view of the general adoption of nightwork and the fact that women and boys are employed in large numbers, is recognized, for "bad lighting affects output unfavorably, not only by making good and rapid work more difficult, but by causing headaches and other effects of eyestrain; the difficulties of supervision, which are always considerable, are further increased if the general lighting of the workshops is insufficient." The pamphlet contains an appendix giving the essentials of localized exhaust ventilation and the principles underlying effective action in each case.

SPECIAL INDUSTRIAL DISEASES.

The necessity of adopting measures to protect munition workers against exposure to lead, tetrachloride of ethane, and nitrous fumes, each of which may cause serious and possible fatal illness, and against contact with trinitrotoluol, tetryl, fulminate of mercury, and certain lubricating and cooling fluids used in metal turning, which may result in the occurrence of troublesome skin affections (dermatitis), prompted the committee to make a study of these special industrial diseases and indicate means of preventing the dangerous effects arising therefrom.

Under industrial conditions lead gains access to the body principally by the inhalation of lead fumes or dust, and careful investigations have established that a daily dose of as little as 2 milligrams must be regarded as capable, when inhaled as fumes or dust, of setting up chronic poisoning. Lead may also enter the system through the digestive tract, by eating with unclean hands, or by putting pipes or other articles into the mouth while the hands are soiled with lead. It is stated that inhalation of lead in the form of fumes or dust can be avoided with certainty only by preventing the production of dust and by insuring that lead fumes do not escape into any place in which work is carried on, but it is recognized that the nature of certain processes may render this impossible. Under such conditions

¹ This question has been treated in the report of the departmental committee on lighting in factories and workshops, a brief digest of which appeared in the December, 1915, issue of the REVIEW, p. 88.

localized exhaust ventilation is recommended. It is believed that few of the respirators obtainable are effective. The existence of a blue line at the edge of the gums is an indication of lead absorption, and headache, colic, constipation, and marked paleness are early manifestations of poisoning. To prevent lead entering the system through the digestive tract the following special steps are recommended:

1. Smoking should be prohibited in all places where lead is manipulated.
2. No person should be allowed to take a meal or to remain during the times allowed for meals in any room where lead is used.
3. Special provision should be made to enable the workers to take their meals elsewhere.
4. Special washing facilities should be provided. These will only be effective if a sufficient supply of clean towels, soap, and nailbrushes is always available.

The Home Office regulations require employers to have persons engaged in various lead industries examined periodically by a surgeon who is intrusted with powers of suspension from work, and this form of medical supervision has been found to be of such value, it is stated, that the committee urges its adoption in all factories where the use of lead oxide or other of its many compounds may have recently been introduced in the manufacture of munitions.

Trinitrotoluol is a substance used extensively in the manufacture of high explosive munitions, which fact brought its poisonous properties into prominence. It may be absorbed by inhalation of vapor or dust through the skin, and through the digestive tract. Operatives employed in its manufacture and in loading it, either pure or mixed with other substances, into munitions have been found affected with unusual drowsiness, frontal headache, eczema, and loss of appetite. Exceptional cases may occur with sudden collapse after a few hours' work on a hot day, but generally the symptoms are at first slight, and if exposure ceases quickly disappear. If, however, the exposure be continued, the symptoms tend to become more severe and may be associated with cyanosis (ashen gray and livid color of the lips), shortness of breath, vomiting, anemia, palpitation, bile-strained urine, constipation, rapid weak pulse, pains in the limbs, and jaundice; while in a few cases profound jaundice, with danger to life, has supervened, and even death has resulted. The committee recommends that the following preventive measures be taken:

1. Every possible step should be taken to prevent the production of dust and the escape of fumes into the air of work places. Persons employed in packing trinitrotoluol, or at other processes in which the production of dust is unavoidable, should be called upon to wear respirators. When melted, trinitrotoluol gives off fumes, and arrangements should be made by localized exhaust ventilation for all fumes to be discharged into the outside air without escaping into the work place. * * *
2. To protect the skin overalls should be worn; the sleeves of the overall should fasten at the neck and the wrist and have no opening in the cuff. Gloves of leather,

strongly sewn, have been recommended, and, if worn, the cuff of the glove should be inside, that is under, the sleeve of the overall. Where women are employed head coverings should be worn.

3. To prevent absorption through the mouth the same preventive measures should be taken as in the case of lead; the provision and maintenance of adequate washing accommodation is specially important. Output has been so urgently required that at some factories work has commenced before building has been completed; at one such factory many cases of troublesome dermatitis (eczema ¹) occurred and caused considerable interference with work, but as soon as suitable lavatories were completed the trouble ceased.

4. The period of exposure should be reduced to a minimum and should not be prolonged by overtime.

Here again periodical medical examination with power of suspending from work any person who is affected, is considered very important.

Manipulation of tetryl (tetra-nitro-methyl-anilin), which is an explosive, produces a light dust which may cause troublesome eczema. Apparently individuals vary in their susceptibility. The parts most frequently affected are the conjunctivæ, the openings of the nostrils, and the chin. The hands and arms are less often affected, and in this the eczema caused by tetryl differs from that due to trinitrotoluol, which usually affects the forearms and hands. Operatives manipulating tetryl may also suffer from headache, drowsiness, and lack of appetite in various degrees of intensity; but the committee understands that no case of illness endangering life has come to the notice of the Home Office. The principal measures to be taken consist in:

1. Avoiding the escape of dust by carrying out manipulations in glass cupboards with armholes for introduction of the hands.
2. Providing light gauze veils to protect the faces of the workers.
3. Supplying, if veils are not worn, some simple powder (such as a mixture of one part zinc oxide to two parts starch) for applying to the face before beginning work.
4. Providing adequate washing accommodation and encouraging the use after washing of an application for the skin.
5. Excluding workers who show special susceptibility or idiosyncrasy.

Apart from its tendency to cause eczema, tetryl stains the skin and hair; in order to prevent this, overalls and gloves, similar to those recommended for workers manipulating trinitrotoluol, should be worn, and, where women are employed, suitable head coverings should be used.

Mercurial poisoning and eczema are caused by the use of fulminate of mercury. While it is suggested that the symptoms are seldom marked, a blue line may be seen on the gums, appetite may be impaired, headache may be present, and there may be nervousness and depression. The last symptom is believed to be important not merely as a sign of illness, but as an indication that the operative

¹ An application found of value to prevent eczema is a mixture of two parts of castor oil to one part of lanolin; this mixture, which should be rubbed into the skin after washing on leaving work, should be placed in the lavatories for general use.

should be removed from dangerous work, which calls for a steady hand and clear head. Eczema of the hands, forearms, and face occur and may cause serious disability. To prevent these evil effects it is suggested that provision of overalls and of adequate washing accommodation should be made, that those specially affected should be transferred to other work, and that where exposure is marked, periodical medical examination should be provided.

Tetrachloride of ethane is a noninflammable liquid and a solvent for acetate of cellulose. It has formed an ingredient of the "dope" varnish applied to the canvas covering and tapes of aeroplane wings and to aeroplane bodies, in order, by impregnating them with cellulose, to render them impervious to moisture and air. This liquid is volatile at ordinary temperatures; its vapor smells like chloroform, is a powerful anesthetic, and being twice as heavy as air, tends to sink to the floor. The poisonous effect of the vapor depends not only upon the amount of vapor in the air but also upon the time during which the air is breathed. Inhalation of this vapor even in small amounts, when spread over prolonged periods, has caused drowsiness, loss of appetite, constipation and pains in the stomach; and in more serious cases, jaundice, liver destruction, coma and death. The committee offers the following suggestions for preventive measures:

1. The number of workers exposed to the vapor should be reduced to a minimum; all processes of "doping" should be in a separate place where no other work is undertaken. * * *

2. Adequate exhaust ventilation must be arranged for; if ventilation is to be adequate and sufficient to sweep away the heavy vapor, the entire air contents of the workroom should be extracted (preferably by volume or propeller fans), at or near the floor level, about 30 times every hour; while for admitting fresh air supply there should be high up in the room numerous hopper openings, the combined superficial area of which should be at least three times that of the area of the exhaust openings.

3. Operatives should not be allowed to remain in the work place during meal hours.

4. The process of "doping" should as far as possible be alternated with other work.

5. The period of exposure should be reduced to a minimum, and not prolonged by overtime. Ventilation on the lines suggested above is only adequate to bring the amount of vapor inhaled within safe limits for ordinary hours of work. Undue extension of these hours not only lengthens the exposure, but lengthens it for individuals who being already tired are less able to resist it.

6. Periodical medical examination should be provided for, with power to suspend from employment any persons affected.

The committee emphasizes the fact that it is absolutely necessary for those working with these poisons to maintain good health. It is thought undesirable for workers to commence work without having taken food, for the evidence apparently shows that hungry and ill-fed workers succumb more readily than others. Half a pint of milk or cocoa before starting work in the morning is recommended, and it is

stated that this practice has been followed with excellent results for many years in certain factories where there is danger from lead poisoning. It is also suggested that workers who are to be exposed to poisonous substances should be carefully chosen, only healthy and temperate persons being employed.

The danger from nitrous fumes, growing out of the demand for explosives, nearly all of which are products of nitration, is especially recognized. A memorandum issued by the Home Office and indorsed by the committee, states that the full effect of the inhalation of these fumes is not felt immediately, and unless workers are warned of the danger, they may continue at work and unwittingly inhale a fatal dose. In such cases, continues the memorandum, the affected person develops an irritating cough, which becomes steadily worse until, three or four hours after exposure, he becomes seriously ill, suffering from marked dyspnea and collapse; sometimes these symptoms come on after leaving work on the way home. The secretion of mucus now becomes profuse and vomiting, which helps to clear the air passages, may occur. The congestion of the bronchioles and alveoli progresses, and, if the case survives 48 hours, definite pneumonic consolidation may develop. More frequently a fatal issue results in about 30 hours, the patient remaining conscious until near the end. It is stated that every case exhibiting the initial symptoms does not progress to a fatal termination, and recovery has occurred even after marked collapse and dyspnea.

The posting of notices warning those employed of the danger of remaining in an atmosphere containing these fumes is considered advisable, and emergency helmets provided with a fresh supply of air from without are recommended. As a routine method of treatment pending the arrival of a physician, who should be sent for at once, it is suggested that the patient should be made to lie down, that he should be kept warm, and that he should be given plenty of fresh air. If he is blue in the face oxygen should be administered, and if he has not been sick he should be given a drink of 1 ounce of salt in 10 ounces of lukewarm water, the dose being repeated until he is sick. Persons even apparently slightly affected must not be allowed to walk home until permitted to do so by the doctor.

Aside from exposure to trinitrotoluol and tetryl, eczema is liable to occur among munition workers employed in engineering work who come in contact with certain fluids used to lubricate and to cool metals. Two forms of inflammation of the skin are indicated: (1) yellow pustules and boils, and (2) more general inflammation, which, in marked cases, develops into typical weeping eczema. Clean overalls, it is suggested, and the use of suitable washing accommodation with hot water, go far to prevent these pustules and boils. The

committee has observed that reasonable facilities for personal cleaning after work are seldom provided in engineering factories, and believes that apart from questions of health, the provision of such facilities should be considered a necessary part of the equipment of every factory. Experience has apparently shown that if lubricating and cooling fluids contain a small amount of some antiseptic, say, carbolic acid up to 1 per cent, or other coal-tar antiseptic, cases of eczema do not occur. It is stated that so-called antiseptic lubricants and cooling fluids are rapidly coming into general use in engineering shops, and that cases of eczema are less prevalent than formerly. Good washing facilities are recommended as a powerful preventive.

The committee concludes that facilities for the prompt treatment of all cases of sickness and injury are of special importance in factories where poisonous substances are used.

SICKNESS AND INJURY.

Following a brief introduction outlining the accumulated experience showing the effect of industrial occupations upon the health of workers, the committee, in its report on sickness and injury, proceeds to list certain injurious conditions or influences affecting health, industrial efficiency and output, in order that employers and their workpeople may guard against them or mitigate their evil effects. Attention is directed to the following points:

1. Excessively long hours of work, particularly by night, if continued, produce fatigue, irritation, and sickness.
2. Cramped and constrained attitudes or postures during work, which prevent the healthy action of lungs and heart.
3. Prolonged or excessive muscular strain, e. g., the lifting of heavy weights, prolonged standing, may produce rupture or varicose veins.
4. Machinery accidents.
5. Working in unventilated or insufficiently ventilated workshops predisposes to disease and gravely interferes with individual energy and physical capacity. The effect of continuously working in a stagnant or polluted atmosphere is not trifling or insignificant.
6. The air, even if fresh, may be too hot or too cold, too humid or too dry; either extreme should be avoided to insure reasonable bodily comfort and the most efficient work.
7. Imperfect lighting, whether by day or night, conduces to eyestrain and headaches.
8. Working with or in the presence of gases, vapors, poisons, and irritating substances (e. g., "doping") may lead to direct poisoning.
9. Dust produced in certain industries, unless effectually safeguarded, may induce lung diseases.
10. The manufacture and use of high explosives involve risk to the workman.

As important as any of these occupational influences, but inseparable from them, it is suggested, is the predisposition to disease arising from an absence of personal hygiene.

The committee points out that indications of sickness in a factory fall into four groups of facts which come before the management: (1) Absence, broken time, irregular time-keeping, or diminished output of the individual worker; (2) the ordinary signs of ill health; (3) the sickness register; (4) death certificates. The subject of the sickness rate is stated to be the most important of these, and as an illustration the report cites a certain munition factory which increased its employees from 14,000 in July, 1914, to more than 36,000 in March, 1915. In the former month the per cent of sickness was 2.9, in December it was 2.4, and in the first quarter of 1915 it exceeded 4 per cent. During this period the accident rate also showed some increase. In two departments the sickness rate among men on overtime was 5.5, as against 3.7 among those on double shifts. In one of these departments the sickness rate reached 8 per cent. The medical officer of the works attributed the increase of sickness and injury in the factory as a whole to a large increase of employees (many new hands), overtime, and nightwork.

Bearing in mind that prevention is better than cure and that for treatment to be most effective it must deal with the beginnings of disease, the committee suggests that the preliminary safeguard is to provide for the medical examination of all workers on their admission to the factory in order to secure as far as may be their initial physical fitness for employment. This being assured, two further duties of the management are suggested. "First, they must reduce to a minimum any unfavorable conditions obtaining in their works—providing proper sanitary conditions and accommodation, safeguarding machinery, controlling hours of labor, furnishing canteen facilities, and securing sufficiently warmed, lighted, and ventilated workrooms; secondly, they must make arrangements for an adequate medical and nursing scheme. The duties of a factory nurse may include (a) supervision of the health of the workers, (b) superintendence of the rest room for those who are temporarily indisposed, (c) following up cases of sickness at home, (d) taking charge of first-aid treatment of injuries, and (e) in the absence of medical advice, observing and controlling in its initial stages any threatened outbreak of the influenza type of sickness, which if it extends may temporarily paralyze output. Wherever nurses have been appointed the committee have found that the scope of their services has extended in many useful directions, and they have no hesitation in recommending such appointments."

Owing to the introduction of new labor, in conjunction with the need for speed and pressure, overtime, and nightwork, the committee anticipated a somewhat formidable rate of accidents in munitions factories, which include not only metal and engineering, in which branches a large number of accidents have always occurred, but also

certain dangerous trades and the manufacture of explosives. The injuries in a typical munition works are not only open wounds, contusions and abrasions, injuries to the eye, sprains, simple and compound fractures, and injured limbs, but also scratches, cuts, burns, and other minor injuries which may readily lead to more serious conditions by neglect.

It is obvious that much can be done by adopting various methods of prevention, such as the proper and effective guarding of machinery, the adoption of safety appliances, the proper regulation of dangerous processes, the adequate lighting of the factory, and the more careful cleaning of machinery. But whatever means be adopted the avoidance of accidents must largely depend on the intelligent cooperation of operatives and foremen in the maintenance and use of the appliances provided, and the committee would be glad to see an extension of the practice of forming committees of workers intrusted with the duty of investigating every accident which occurs in their own work place. In spite, however, of the most perfect regulations and precautions accidents will happen, and the committee desire, while drawing attention to the importance of prevention, to emphasize also the pressing need for the provision of suitable means of treatment, and particularly of what may be thought of as first-aid treatment for minor injuries. * * *

This plan for the protection of workers and the treatment of injuries in factories may be developed, it is believed, by the adoption of the following methods of advising and instructing employees:

1. Intelligent and vigilant supervision by the foreman.
2. A training in the essentials of first aid of a sufficient number of workers to provide that in each shop there are at least one or two persons who know how to render first aid in cases of injury; such instruction may well include some lessons on the value of ventilation and the importance of using the means provided to secure it; unfortunately, long hours of work and the difficulty of obtaining competent teachers make training difficult to organize at present, and more use must therefore be made of method 1.
3. The distribution of leaflets or placards of instruction and advice.

It is noted that some provision is made in the majority of factories for the treatment of injuries, but the need for improvement along this line is suggested. What is required, in the opinion of the committee, is an adequate though simple organization which provides (1) a local dressing station or aid post in each work place for minor injuries, and (2) a central dressing station or surgery for more serious cases or cases requiring continuous treatment. A brief outline of how these should be conducted, and the equipment required is presented. Emphasis is laid upon the necessity of keeping a full and accurate register of all cases of sickness and accidents, with particulars of dressing and redressing and treatment. Based upon evidence and reports received from all parts of the country of the economic and industrial value of the proper organization of a medical service within the factory, the committee is convinced that the adoption of this plan is essential to prevent loss of time and efficiency among the workers. Provision for organized treatment in every munition factory is recommended.

CANTEEN CONSTRUCTION AND EQUIPMENT.

Memorandum No. 6, dealing with canteen construction and equipment, is issued as an appendix to Memorandum No. 3, Industrial Canteens, noted in the May number of the REVIEW. It contains detailed suggestions and specifications for the erection of these buildings, including ventilation, lighting and heating, external and internal material to be used, cooking apparatus and kitchen and catering equipment. Drawings for two types of canteen are included as inserts.

EMPLOYMENT OF WOMEN IN GREAT BRITAIN AS AFFECTING LABOR CONDITIONS AFTER THE WAR.¹

A conference committee of the British Association for the Advancement of Science appointed to investigate outlets for labor after the war began its inquiry early in June, 1915, and confined its activities to the following terms of reference: (1) To investigate the replacement of men by women in industry during the war, and (2) the permanent effects of this after the war. Primarily the investigation dealt with industries in which the extra employment of women since the war has been most marked as well as those industries in which there were possibilities of an extension of women's work, with special reference to those trades localized in the London, Manchester, Leeds, and Birmingham districts. The interim report of this conference, submitted at the meeting of the British association held in Manchester in September, 1915, is a pamphlet of 82 pages setting forth the extent of the employment of women during the year August, 1914, to August, 1915, some general features of the labor market arising out of the new conditions of women's employment during the year, possible limitations to the industrial employability of women, wages, and their relation to the employment of women, the probable outstanding features of women's employment after the war, and a great mass of detail relating to the employment of women in specified trades or branches of industry.

Tables are presented showing the state of employment for industry as a whole, in September, October, and December, 1914, and in February, 1915, compared with employment in July, 1914, and the state of employment for those industries most affecting women's labor. The following table summarizes the general situation and indicates the number and per cent of males and females employed in the months indicated compared with the approximate numbers in

¹ Great Britain. British Association for the Advancement of Science. Draft interim report of the conference to investigate into outlets for labor after the war. 1915. 82 pp.

industrial occupations in July, 1914, based on the census of 1911, namely, 6,500,000 males and 2,500,000 females:

STATE OF EMPLOYMENT IN SPECIFIED MONTHS SINCE THE OUTBREAK OF THE WAR COMPARED WITH JULY, 1914.

[Percentages are based upon the approximate industrial population, July, 1914: 6,500,000 males and 2,500,000 females.]

Item.	Males.							
	September, 1914.	Per cent.	October, 1914.	Per cent.	December, 1914.	Per cent.	February, 1915.	Per cent.
Total employment.....	5,837,000	89.8	5,804,500	89.3	5,791,500	89.1	5,733,000	88.2
Contraction of employment..	663,000	10.2	695,500	10.7	708,500	10.9	767,000	11.8
Known by employers to have joined the forces.....	572,000	8.8	689,000	10.6	864,500	13.3	1,010,000	15.4
Net displacement.....	91,000	1.4	6,500	.1				
Net replacement ¹					156,000	2.4	243,000	3.6

Item.	Females.							
	September, 1914.	Per cent.	October, 1914.	Per cent.	December, 1914.	Per cent.	February, 1915.	Per cent.
Total employment.....	2,290,000	91.6	2,345,000	93.8	2,420,000	96.8	2,462,500	98.5
Contraction of employment..	210,000	8.4	155,000	6.2	80,000	3.2	37,500	1.5
Net displacement.....	210,000	8.4	155,000	6.2	80,000	3.2	37,500	1.5

¹ This does not necessarily mean that men were replaced entirely by women. In many cases there was a replacement by employment of men and boys previously unemployed or unoccupied.

The following table indicates the contraction and expansion of employment in specified months compared with July, 1914, in industries most affecting women's labor.

PER CENT OF CONTRACTION AND EXPANSION OF EMPLOYMENT, SEPTEMBER, OCTOBER, AND DECEMBER, 1914, AND FEBRUARY, 1915, COMPARED WITH JULY, 1914, IN TRADE GROUPS MOST AFFECTING FEMALE LABOR.

Trade group.	Approximate industrial population, July, 1914. ¹	Contraction of employment.				Expansion of employment.			
		Sept., 1914.	Oct., 1914.	Dec., 1914.	Feb., 1915.	Sept., 1914.	Oct., 1914.	Dec., 1914.	Feb., 1915.
Chemicals, including explosives.....	29,000	1.1	(²)	(²)					38.0
Leather, leather goods, etc.....	19,000	11.8					2.0	10.1	26.6
Engineering.....	21,000	.5					2.2	12.3	26.4
Hosiery.....	52,000					0.3	5.2	7.8	10.4
Wool and worsted.....	158,000	4.3	1.9					3.1	2.1
Boot and shoe.....	49,000	.3	1.7	1.0					1.3
Clothing.....	995,000	8.6	5.2	3.2	0.6				
Cotton.....	400,000	14.9	14.0	9.3	3.0				
Linen, jute, hemp, and other textiles.....	107,700	1.0	.8	1.4	3.5				
China, pottery, and glass.....	34,000	5.3	4.8	1.9	5.6				
Paper and stationery.....	49,000	4.4	6.2	6.0	8.3				
Food and tobacco.....	100,000	13.6	11.8	8.3	9.6				
Furniture.....	23,000	13.1	12.7	8.4	9.9				
Cycle, motor, wagon, and carriage building.	11,000	8.5	12.4	5.1	10.7				

¹ The approximate industrial population in July, 1914, is assumed to be the same as that indicated by the census of 1911.
² No figures available.

It is frankly admitted that at the time the report was prepared (August, 1915) it was not possible to determine with precision the extent of the replacement of men by women. During the early months of the war many industries employing women were greatly depressed, but later the Government came into the market as chief buyer and between September and December, 1914, over 130,000 women poured into those trades—leather, tailoring, metal trades, chemicals and explosives, hosiery, and the wool and worsted industry—which had been suddenly revived by the placing of large orders by the allied Governments. Eighty thousand unemployed women remained, however, in spite of the natural shortage of men, which amounted to about a quarter of a million. "Fortunately," declares the report, "the new demand was to a large extent for that class of goods in the production of which female labor normally predominates." As enlistments increased trades dependent upon the work of skilled men found it necessary to employ women, the most noteworthy increase in this respect being in chemicals and in the metal and engineering trades included in the munitions group.

It is clear that the year has seen an enormous upheaval in industry; factories have been adapted to meet new demands and to facilitate women's employment; trade-union and Home Office restrictions have been relaxed; women are replacing men; experiments are being made and knowledge gained which may well revolutionize many branches of industry. The one great factor upon which industry as a whole now depends is the volume of Government contracts. At the end of the war these will substantially decline and industry will begin to resume its normal course. But every transference of labor, every youth put into a man's place, every woman who has received training because of the war adds something to the bewildering chaos of those industrial problems which will have to be grappled with when peace is declared.

In outlining the general position it is suggested that three features of the labor market stand out in special prominence: (1) The serious shortage of skilled workpeople; (2) the considerable extension of women's employment; (3) the limited extent to which women have replaced men in the sense that women are now doing work previously done by men.

It appears that not only has the majority of women, owing to their lack of training, found it impossible to take up skilled work in these trades but the absence of skilled workers among them has in turn proved an almost insuperable obstacle to the employment of any but a small proportion of the great waiting army of willing but unskilled female labor. "This shortage of skilled labor is the cardinal feature of the industrial position with which the nation is now faced." The trades in industry proper in which the extension of women's employment has been most marked are engineering, chemical trades (explosives), leather work, tailoring,¹ meat preserving and grain

¹ The table on p. 92 indicates a contraction in employment in these trades. This difference is not explained.

milling, basket (shell) making, elastic webbing, scientific instrument making, brush making, electrical engineering, canvas sack and net making, leather tanning, rubber work, hosiery, hardware, wire drawing, tobacco,¹ boot and shoe trade, shirt making, wool and worsted, silk, and the jute¹ trade. Excluding the munitions branch of engineering, the extra employment of women in these trades at the date of the report probably did not exceed 100,000 and four months previously was little more than half that compared with the same month in 1914. It seems that the extra employment of women in any branch of industry proper has been effected by transference from trades that are depressed or from branches of the same trade which are slack to those that are brisk and does not necessarily indicate the extent to which men have been replaced. A marked acceleration in women's employment is indicated in nonindustrial occupations, such as shop assistants, bank clerks, miscellaneous clerical work, waitresses in hotels and elsewhere, and to a limited extent on certain forms of railway work. In these occupations it would seem that women have probably replaced men in the sense of doing men's work to a greater extent than in industry proper. In certain employments the relaxing of trade union and Home Office restrictions has had the effect of extending women's employment. In leather, engineering, metal trades, wool and worsted trades, etc., the trade-unions have agreed with employers that for the period of the war only women may work on processes which were previously done wholly or partially by men, on the condition that the wage rates paid to the women shall be the same as those paid to the men.

From the fact that fewer men and more women are now in industry, as indicated in the table above, the report suggests that there is a *prima facie* case for supposing that women have replaced men in the sense that they are now doing processes which before the war were done by men. This, however, does not appear to be borne out by the evidence presented, for the report states that it is inaccurate, save in special instances and to a limited degree, universally to interpret in this manner figures indicating the increased employment of women. A large part of the Government demand for goods seems to be in those branches of trades in which a larger proportion of women are employed than in the trades as a whole. The report cites as an example the tailoring trade, which normally employs about 130,000 women, together with a large casual fringe of women who come into the trade in times of seasonal pressure. Here the medium branches, in which the clothing of a soldier is made, have drawn women and girls from its other branches and from its fringe of casual labor, as well as from other trades in which there was a surplus of female labor.

¹ The table on p. 92 indicates a contraction in employment in these trades. This difference is not explained.

The trade thus shows a great increase of female labor since the war which has been drawn in not to undertake work previously done by men, but merely to cope with a huge increase of orders in that branch of trade in which a larger proportion of women than men is normally employed. So in industry proper, the report seems to indicate that much of the extension of women's employment during the war has been in work which is normally done by women and in which the necessities of war have created an unprecedented demand. Work done by women in other trades, as in the munition factories, has been exceptional work which is expected to decline with the advent of peace. However, it was found to be a fact that women have been undertaking processes in many trades which were previously thought just above the line of their strength and skill, this being particularly noticeable in leather, engineering, and the wool and worsted trades, in pottery, cotton, and the printing trade. In nonindustrial occupations, such as clerical work, certain forms of railway work, tram and bus conducting, in various forms of retail distributive work, and in warehouse work, women appear to have replaced men, in the sense of doing work previously done by men, to a much greater extent than has occurred in industry proper. Employers have made an effort to readjust their work in order to facilitate the employment of women.

One of the most serious dangers revealed by the present crisis is declared to be an insufficient supply of skilled labor among women, which has emphasized the importance of industrial training both in its immediate and permanent aspects. To meet this demand experiments in the training of women are being made, this training being dependent upon (1) circumstances, common both to men and women, relating to the organization of industrial training, and (2) psychological, physical, and other conditions in which men and women differ. The report indicates three main directions in which development is to be desired:

1. The further establishment of full-time technical and trades schools, working in close cooperation with the trades concerned and making a special study of the most recent developments in technique and the future prospects of the several trade processes.

2. The development of part-time continuation schools, and of the practice of permitting young employees to attend during working hours, in view of the generally admitted failure of evening instruction at the end of a day's work.

3. A workshop training systematized and reduced to the shortest period compatible with efficiency. In some trades this might take the form of a modified apprenticeship adapted to the needs of the time. * * * In some trades, however, systematic promotion from one department to another would probably be possible without formal apprenticeship.

In a few of the trades, especially metal working, all of the highly skilled workers have been men, and an effort was made by the committee to determine whether women are capable of becoming highly

skilled workers, and if so, whether they would in normal times be preferred to men. Recognizing that this depends upon a variety of circumstances, physical, psychological, economic, and social, and suggesting that employers differed as to the possibility of training women to become as skillful and efficient as men, the committee concludes that experience arising out of necessity is teaching that, given the opportunity, women can produce work which, in spite of their lack of industrial experience, compares favorably with similar work done by men. Several instances are cited indicating something of the possibilities of the replacement of men by women, especially in munitions, where women are increasingly needed.

The report reviews some possible limitations to the industrial employability of women, many of which, it is suggested, will always remain, but some of which will undoubtedly be considerably modified, especially if the women concerned are sufficiently anxious to overcome them and to enter and remain in industry on more equal terms with men. The limitations enumerated include:

1. Women's lack of physical strength and staying power as compared with men.
2. Certain forms of work are believed to be bad for women's character or debasing to her taste, so as to make her less fit to care for and train the next generation. Here the problem is more difficult, and where these difficulties are real probably improvements could sometimes be made in conditions and hours of work.
3. The comparative shortness of women's industrial career has led employers to regard time given to the acquisition of technical knowledge by women as wasted.
4. Women in the main do not regard their occupation as their life's work.

The committee admits the difficulty of prophesying the future attitude of women toward industry, but expresses the opinion that it is not incorrect to say that heavy work and work requiring great physical strain are debarred to woman because of her lesser physical strength and stamina. Her attitude toward marriage is also believed to be essentially one of the realities to be faced, for whether woman comes into industry on greater terms of equality with man as far as training and continuity of employment are concerned depends upon her own inclination in the matter, though changed economic and social circumstances may force a still larger proportion of women into the labor market. How far she is able to compete then with men would appear to be determined by her own will and the natural disabilities which press all too unfairly upon her in competing with men in industrial life.

The committee recognized the controversial and complicated character of the question of wages as related to the employment of women. On the average they receive from 50 to 75 per cent of the wages paid to men in the same occupations, but it is made clear that a mere statement of comparative wages of men and women, without mention of the attendant circumstances, is useless. The limitations to women's

employability, already mentioned, must be borne in mind in a consideration of the question of wages, as they have a direct bearing upon the question of women's output as compared with men. The reasons given by employers for the lower wages of women are divided into two groups, the first including the following causes:

1. Women can perform only the lighter processes.
2. The output of women is less than that of men.
3. Women are less skilled and experienced than men and are rarely willing to devote much time to training even if employers thought (as they rarely do) that the shorter duration of their industrial life justified a long training.
4. Some conditions, such as nightwork, are more objectionable in the case of women than of men.

The second group of reasons advanced by employers is said to depend more upon custom and social outlook. The evidence gathered by the committee seems to show that the difference between wages of men and women is often more than can be justified by any difference in efficiency, and that this results in making it profitable for firms to introduce the largest possible amount of female labor. Whether payment of lower wages to a woman be unjust to her or not, the trade-unions maintain that it is unjust to the man whom she is thus able to underbid. The report states that the evidence of many employers tends to show that where they have replaced men by women their wages bills for the same output were greater than when they employed men only, which bears out the contention of some that low-paid, inefficient labor is by no means "cheap" labor. The committee admits that there are exceptions to the general contention that men are more efficient industrial workers than women and suggests that it is in those occupations and processes which demand the peculiar qualities of women that an extension of women's employment, under conditions and at wages not less favorable than men's, is most likely to occur in the future rather than in industry as a whole. Several instances are cited in support of the conclusion that the fair-wages clause included in all Government contract agreements does not sufficiently safeguard the standard of wages paid to women and secure to them fair wages.

In considering the status of the woman worker after the war the committee found that employers almost unanimously intend to take back those of their former employees who express a desire to return, although it is known from past experience that a large number of those returning will not care to take up their former work.¹ While indicating a general feeling on the part of employers that the women workers will have to be dispensed with, the committee expresses the opinion that many who left trades depressed by the war or who

¹ One large drapery store from which many men went during the South African war stated that of those who returned to England only 6 per cent wished to return to their former occupation.

transferred from other branches of the same trade in which work was slack, to take places left vacant by men, will probably return after their trades revive. In nonindustrial occupations, with the exception of railways, a large number of women are likely to remain after the war. In these occupations the probability of a permanent increase in the employment of women is recognized. In spite of the attitude of employers indicated above, the report anticipates that after the war the proportion of women in industry will be greater than before, and that the competition of men and women will increase. Where female labor is either underpaid or is obviously superior to male labor, a special inducement offers itself to employers to retain women, and it is believed that this will result in a number of the women remaining after the war. In order to minimize the bad effects which it is thought this situation may produce, the following measures are suggested:

1. The extensive emigration of women. It is expected that considerable proportion of the men discharged from the army at the close of the war will have acquired a taste for an open-air life, and will prefer the prospects offered by the colonies to those in these islands. Unless, therefore, the respective sexes are to be distributed over the Empire even more unevenly than at present, steps must be taken to insure the emigration of women in something like the same proportion as that of men.

2. The better technical training of both boys and girls. * * * It is the experience of all trades that except in processes which have been superseded by others, the supply of highly skilled workers is usually less than the demand. * * * There are signs that the trade unions are entering upon the policy of preventing the undercutting of men by women rather by regulating women's wages than by excluding them entirely from the more skilled processes. The highly paid skilled workers as a class are not likely to be detrimentally affected by the augmentation of their numbers, whether the recruits come from one sex or both. It is the reserve of cheap unskilled or semi-skilled labor which hitherto has seemed almost inexhaustible which is their real danger. * * *

3. An extension of the policy of equal pay for equal work having regard to the realities of the case, and, as a corollary, a minimum wage for unskilled labor both male and female. This policy should be so framed as to prevent the employment of unskilled labor from being more profitable than skilled in those forms of production in which they can be alternatively employed, e. g., engineering. * * *

4. The abolition of "half-timers" in those industries which still employ this form of child labor.

5. The withdrawal of widows with young children from the labor market by the institution of an adequate pension scheme, at the same time introducing further restrictions with regard to home work.

More than two-thirds of the report is devoted to detailed statements giving the position of each trade owing to the war and the nature of the increased employment of women, especially with reference to those processes in which they have replaced or are likely to replace men. As to the retail distributive trades the evidence collected by the committee prompted the following conclusions:

1. The replacement of men by women has occurred to a larger extent in the distributive trades, and especially in grocery, than in most other trades and occupations.

Practically the only limitations to women's employment in these trades have been in work requiring physical strength or technical knowledge.

2. The movement of labor into these trades has been from trades which are depressed owing to the war, such as millinery, dressmaking, and luxury trades generally. Girls from 15 to 18 years of age, mostly from secondary schools, and women from comparatively well-to-do families hit by the war, have also been absorbed to a considerable extent. The movement into the heavier branches of the trades has been largely from lower-paid occupations, such as some kind of factory work, domestic service, and laundry work. In few cases have married women returned.

3. In the opinion of the majority of employers, the actual value of a woman as a worker is about 30 per cent below that of an average man employed in the same capacity, the difference being due partly to physical strength and partly to incapacity of continued employment because of marriage.

4. A minority of employers, however, find that, with improved organization and greater subdivision of processes, many places can be found for women in which their economic value is equal to that of an average man.

5. The actual wages of women tend to be lower in proportion to those of men employed in similar capacities than would be justified even by a less favorable estimate of their economic value. This discrepancy appears to be due to custom and to the inferior economic status of women as workers.

It is stated that approximately 90,000 men (about 14 per cent) employed on railways have enlisted, thus creating a demand for women chiefly to fill places as carriage cleaners, ticket collectors, and checkers. At the time the report was prepared women were receiving considerably less wages than men, but under an agreement reached between the railway companies and the National Union of Railwaymen, the pay of women and conditions of labor during the war are to be the same as for men. Conditions in the railway service are said by trade-unionists to have become increasingly favorable of recent years to the employment of women in clerical positions, and it is believed that such employment is more likely to be permanent than that on the operative side, and in certain branches may be even further extended.

The disabilities of women as compared with men in several branches of the clerical service, and the fact that the harder and less pleasant work and the early and late turns must continue to be performed by men, constitute a strong argument in the men's favor, and the right policy seems to be to insist on the higher value of the men's service and to demand the maintenance of their present rates of pay rather than to demand what is less justified by the facts, the raising of women's rates to an equality with those paid to men.

The chief objections to the employment of women in railway work are stated to be—

1. Limitation to woman's sphere of activity.
2. Isolation of railway clerks in outlying offices.
3. Mobile character of the work, frequently involving transference from one district to another.
4. The difficulty of a practical early training.
5. Women have the easier work, while men take the nightwork and late evening and early morning turns.

Since the war women have been increasingly employed as conductors on trams and motor busses. They have been employed usually at the same rates of wages as men, but generally work six hours instead of eight. The report notes briefly the increased employment of women in miscellaneous clerical positions, in banks, insurance, under local authorities, and in the civil service.

A large increase in the employment of women was found in the metal trades, notably in the manufacture of small arms, scientific and optical instruments, hardware, and wire drawing and chain making. In munition factories many women are actually doing work previously done by men. It is thought that the work which women are doing in these factories will be of a temporary character. Taking the industry as a whole there appears to be little definite evidence of the actual displacement of men by women; the increase in the number of women is mainly due to a temporary increase of production.

The following table shows the state of employment in the engineering and metal trades, including munitions:

STATE OF EMPLOYMENT IN ENGINEERING AND METAL TRADES (INCLUDING MUNITIONS) IN FEBRUARY, 1915, AS COMPARED WITH JULY, 1914.¹

Trade.	Males.		Females.	
	Approximate industrial population, July, 1914. ¹	Per cent decrease in February, 1915.	Approximate industrial population, July, 1914. ¹	Per cent increase in February, 1915.
Small arms.....	6,000	6.6	² 1,200	4.4
Scientific instruments.....	27,000	³ 1.2	5,000	8.5
Wire drawing, chain, etc.....	45,000	6.6	15,000	4.4
Hardware.....	103,000	14.1	23,000	2.7
Musical instruments.....	28,000	17.6	6,000	2.5
Tin plate.....	23,000	14.2	3,000	1.4
Iron and steel.....	311,000	5.7	2,000	⁴ .2
Cutlery, tools, etc.....	54,000	9.1	17,000	⁴ 5.4
Other metals.....	104,000	8.8	20,000	⁴ 6.5
Jewelry, watch, and clock making.....	44,000	27.9	12,000	⁴ 12.8

¹ For the purpose of this table the approximate industrial population in July, 1914, is considered the same as that indicated by the census of 1911.

² The 1911 census shows only 300 women in this trade, but employers' returns show 1,200 occupied in July, 1914.

³ Increase.

⁴ Decrease.

It was found that the women were receiving considerably lower wages than men would be paid for the same work. Girls under 18 years of age are said in some instances to be receiving as little as 9s. (\$2.19) a week and those over 21 years 15s. (\$3.65) a week for work on which men have formerly received a minimum of 26s. (\$6.33). However, "no comprehensive consideration of the question is yet possible owing to the difficulty of obtaining complete evidence in a

trade which is undergoing considerable change and into which women are still pouring in very considerable numbers."

The report states that in no other trade, save those connected with the manufacture of munitions, has the increased employment of women been more marked than in the leather and tailoring trades, but this apparently has been due to the enormous increase in the amount of work to be done rather than to the necessity of replacing men. Most of the women are employed in work normally done by women. As to the employment of women after the war, it is believed that in the leather trade there will be a great deal of unemployment owing to diminution in demand for leather goods, while in the tailoring trade much will depend upon the introduction of machinery.

The report indicates a steady increase in employment in the chemical trade since the outbreak of the war. The number of women in explosives in July, 1914, was about 8,000 and this has considerably increased. There appears to be no question of women working on processes previously done by men. Very little, if any, substitution of women for men was found in the cotton and wool and worsted industries, hosiery, silk, food, and tobacco trades, and a contraction in the numbers employed is indicated in the food, cotton, and tobacco trades.

CIVIL-SERVICE RETIREMENT AND OLD-AGE PENSIONS.

The problem of retiring from the civil service of the Federal Government the superannuated employees has again come up for considerable discussion in the present session of Congress. In 1910 the bureau issued reports on civil-service retirement in Great Britain, New Zealand, and Australia, and for one of the States of the last named (New South Wales). In response to a resolution dating from January 11, 1910, it also submitted to the Senate on October 20, 1914, a report on civil-service retirement in Canada, a report which has, however, not yet been printed by that body. Other material also has been collected by the bureau in response to requests for information.

At present four States of the Union have legislation of more or less comprehensive character providing for the retirement from their civil service of superannuated and incapacitated employees with the payment of a moderate pension. These States are Illinois, Massachusetts, New Jersey, and Pennsylvania. In addition, 159 cities of the United States have inaugurated such a system for all or some of their municipal employees. Under these systems policemen and firemen are more generally included. Fifty of the cities having a population of more than 100,000; 44 of those having a population of from 50,000 to 100,000, and 65 of those cities which have from 25,000 to 50,000 population have some form of pension plan covering some

part of their employees. The list of these cities together with their population is set forth in an accompanying tabular statement, based upon information furnished by the New York City Commission on Pensions for a report by the National Civic Federation.¹

The bureau has collected a list of 32 foreign countries, not including subordinate States within those countries, which have organized schemes of retirement for their civil employees. This list probably is not complete.

The principal features of the civil-service retirement legislation in some of the more important countries are set forth in the accompanying tabular statements. In spite of the diversity of the provisions of this legislation, certain uniformity of principles is apparent. Provision is generally made for a voluntary and a compulsory age of retirement. A certain number of years of service are required on the part of the employee, ranging generally from a minimum of 10 years to a maximum of 30 years, although New Zealand requires 40 years. Most of the countries here noted place some burden of the support of the system upon the employees, but Belgium, Germany, and Great Britain are conspicuous for the fact that the system is wholly supported by the Government. The amount of payment is usually dependent upon the salary and years of service. Survivors are in some measure generally included. Disability, as well as old age, is also recognized as a factor in the problem.

What is probably only a partial list of the old-age pension schemes adopted by corporations of various kinds in the United States and numbering over 100 has been compiled by the bureau and is printed here. Great diversity exists in the manner of determining the amount of pension which the large corporations and business concerns have put into effect in the interest of their employees. Nineteen plans have been tabulated as follows:²

1. One-half of the yearly salary for the average of the 10 years preceding retirement, not to exceed \$500 per annum.
2. For each year of service 1 per cent of the average wage for 10 years preceding retirement, minimum being \$240 per annum.
3. One-half of the annual salary, not to exceed \$3,600 per annum.
4. One-half of the average earnings during the preceding year, with an additional 5 per cent for each year of service after 25 years.
5. One dollar per day flat rate.
6. One-half of the annual pay for the average of the preceding 10 years, not to exceed \$500 per year nor less than \$20 per month.
7. For each year of service 2 per cent of the annual wage paid at the time of enrollment in pension system.

¹ The Problem of Pensions, Federal, State, Municipal, and Industrial. New York, National Civic Federation, 1916. 15 pp. Folded tables.

² Report of the Commission to Investigate Pensions for State and Municipal Officers and Employees Pursuant to Senate Joint Resolution No. 4, P. L. 1915; Tabulation of Pension Laws of New Jersey; With Additional New Jersey Pension Laws. [No place; no date.] 14 pp.

8. One-half of the average pay for the preceding 10 years, not to exceed \$500 per annum.
9. For each year of service, $1\frac{1}{2}$ per cent of the average annual pay during the consecutive five years when pay was highest.
10. For each year of service, 1 per cent of the annual wage paid at the time of enrollment in pension system.
11. One per cent of the last average wage for each year of service.
12. Two per cent of the average yearly pay for the 10 years preceding retirement, payable monthly; also sick and death benefits.
13. For each year of service, 1 per cent of the average annual pay for the preceding 10 years, plus \$10 per month.
14. For each year of service, $1\frac{1}{2}$ per cent of the highest pay during any consecutive 10 years up to \$50 per month, and three-quarters per cent of any excess over \$50.
15. A pension system classified according to years of service.
 - Class 1—20 to 24 years' service, 50 per cent of the average annual pay for the preceding 5 years.
 - Class 2—25 to 29 years' service, 55 per cent of the average annual pay for the preceding 5 years.
 - Class 3—30 years' service or over, 60 per cent of the average annual pay for the preceding 5 years.
16. For each year of service, 1 per cent of the average annual pay during the 10 years preceding retirement, not to exceed \$100 per month, or less than \$21 per month.
17. A graduated scale of pensions running from 30 to 50 per cent of the monthly wages, minimum being from \$25 to \$80 per month.
18. Old or incapacitated employees at one-half pay.
19. Superannuation fund, to which corporation and employees contribute.

COUNTRIES AND STATES HAVING CIVIL-SERVICE RETIREMENT LEGISLATION.

Argentina.

Australia:

New South Wales.

Queensland.

South Australia.

Tasmania.

Victoria.

Western Australia.

Austria.

Belgium.

Bolivia.

Brazil.

British India.

Canada.

China.

Cuba.

Denmark.

Egypt.

France.

Germany:

Bavaria.

Prussia.

Saxony.

Wurttemberg.

Baden.

Germany—Concluded.

Hamburg.

(Probably all other German Federated States.)

Great Britain.

Greece.

Hungary.

Iceland.

Italy.

Japan.

Luxemburg.

Mexico (department of public instruction).

The Netherlands.

New Zealand.

Norway.

Persia.

Philippine Islands.

Portugal.

Russia.

South Africa:

Cape of Good Hope.

Natal.

Sweden.

Switzerland (separate Cantons).

PRINCIPAL FEATURES OF CIVIL SERVICE RETIREMENT

Countries.	Pension system.	Age of retirement.		Years of service required.	Burden of payment.
		Voluntary.	Compulsory.		
	1	2	3	4	5
Argentina	Compulsory for those not otherwise provided for; elective for others; contributory.	55 years.....	.....	20-30.....	Employees 5 per cent of salary; one-half first month's salary; one month's increase at time of promotion; balance by State.
Australia (Commonwealth).	Compulsory life insurance at time of entrance into service; contributory.	60 years.....	65 years, but at discretion of authorities.	.....	Employee.....
New South Wales.	Compulsory endowment insurance; contributory.	60 years.....	65 years (certain exceptions).	.....	do.....
New Zealand..	Voluntary for those in service at adoption; compulsory for those subsequently joining; contributory.	65 years; females, 55 years.....		40; females, 30.	Employee; contributions vary with age of entrance from 5 to 10 per cent of salary; Government contributes amounts for those retired whose contributions not sufficient, or retired before operation of act.
Canada.....	Contributory.....	60 years.....	.....	10.....	Employee; 3½ per cent of salary if \$600 or over; 3 per cent if less than \$600 during 35 years of service; repayable at rate not to exceed 5 per cent, at discretion of Governor General.
Great Britain..	Noncontributory..	60 years.....	65 to 70, at discretion of Government.	10.....	Government.....
Austria.....	Compulsory; contributory.	60 years.....	70 years for teachers only.	10.....	State and employees; employees of Class I to III, 3.5 per cent; Class IV to XI, 4.3 per cent; State servants without rank of officials, 1.6 per cent of salaries; during fixed period all classes also pay service tax.

LEGISLATION IN REPRESENTATIVE COUNTRIES.

Amount of pension. 6	Maximum pension. 7	Survivors' pensions.		Disability pensions. 10
		Widows. 8	Orphans. 9	
2.7 per cent of average salary of last 5 years multiplied by years of service.	95 per cent of basic salary.	One-half regular pension, for 15 years or until marriage of widow or daughter, or attainment of 20 years of age for son.		2.4 per cent of average salary of last 5 years multiplied by years of service.
Dependent upon salary and ability to pay premiums.				
Fixed by regulation in proportion to salary.				
10/60 of average salary of last 3 years for each year of service.	2/3 salary, or £300 (\$1,459.95).	£18 (\$87.60) per annum to widow during widowhood.	£13 (\$63.26) per annum for each child under 14 years.	Same as service or old age.
10/50 of average salary of last 3 years; increase 1/50 for each year over 10 years of service.	35/50 of last 3 years' average salary.	Provided for by State life insurance; minimum \$1,000, maximum \$2,000.		One month's pay for each year of service if leaving before 10 years' service; otherwise same as old-age pension.
1/80 of average salary for each year of service, plus 1/30 of average annual salary as lump sum, if retired after 2 years' service.	1/2 average salary.	Last year's salary upon death at any time after 5 years' service to legal representative.		For permanent incapacity same as regular pension.
After 10 years' service, 40 per cent of last salary, and in Class IV to XI additions, 2.4 per cent of salary, etc., so that after 35 years' service pension equals full salary; in few occupations 2 per cent added for each year after first 10 years.	100 per cent of last salary; minimum 800 crowns (\$162.40) for officials; 400 crowns (\$81.20) for State servants.	Fixed according to rank of husband; minimum 800 crowns (\$162.40) and maximum 6,000 crowns (\$1,218); widows of State servants receive 1/3 of last salary of husband and minimum of 400 crowns (\$81.20).	For each child through 24 years of age 1/5 of widow's pension, not to exceed 600 crowns (\$121.80); sum of pensions to children not to exceed widows' pension; orphans receive 1/2 of widows' pension; orphans of State servants receive minimum of 210 crowns (\$42.63).	40 per cent of salary if disabled after 5 and less than 10 years' service; 25 per cent if disabled after less than 5 years' service; after 10 years' service, regular pension.

PRINCIPAL FEATURES OF CIVIL SERVICE RETIREMENT

Countries.	Pension system. 1	Age of retirement.		Years of service required. 4	Burden of payment. 5
		Voluntary. 2	Compulsory. 3		
Belgium.....	Noncontributory..	65 years.....	.....	30.....	State; for widows and orphans' pensions employees contribute to special funds.
France.....	Compulsory; contributory.	60 years for sedentary occupations; 55 years for active occupations.	.....	30; 25 if 15 were spent in active occupation.	State and employees, the latter paying 5 per cent of their salaries, and 1/12 of their salaries on appointment or reinstatement, as well as 1/12 of all salary increases.
German Empire.	Noncontributory..	65 years.....	65 years at discretion of Government.	10.....	Empire.....
Prussia.....	.....do.....	.....do.....	.....do.....	.....do.....	State.....
Bavaria.....	.....do.....	.....do.....	.....do.....	After status is permanent (after 3-10 years).	.....do.....
Wurttemberg.	.....do.....	.....do.....	.....do.....	9.....	.....do.....
Saxony.....	.....do.....	65 years or after 40 years of service.	.....do.....	10.....	.....do.....

LEGISLATION IN REPRESENTATIVE COUNTRIES—Concluded.

Amount of pension. 6	Maximum pension. 7	Survivors' pensions.		Disability pensions. 10
		Widows. 8	Orphans. 9	
1/60 of average salary for last 5 years, 1/50 in employment of "active service," for each year of service; $\frac{1}{2}$ of salary if pension does not equal 300 francs (\$47.90).	75 per cent of basic salary; maximum 7,500 francs (\$1,447.50).	Based on average of husband's salary for last 5 years and on years of participation in survivors' pension fund; not exceeding husbands' pension, nor 1/2 of his last salary, nor 4,000 francs (\$772).	For each child under 18, widow's pension augmented by 2 per cent of average salary of husband for last 5 years; increase not to exceed 10 per cent.	For permanent disability; permanent disability in discharge of duty, pension equals 1/4 of last salary augmented by 1/60 of salary for each year of service in excess of 5 years.
1/60 of last 6 years' average salary for sedentary occupations and 1/50 for active occupations for each year of service.	3/4 of salary for those receiving less than 1,000 francs (\$193) salary, and 2/3 for higher salaries, with absolute maxima, graded according to salary, up to 6,000 francs (\$1,158).	1/3 of pension of husband.	If the mother is dead, 1/3 of the father's pension for all orphans combined without regard to their number, up to 21 years of age.	Without respect to age if disability caused by sickness or injury in performance of duties.
20/60 of last salary after 10 years of service plus 1/60 for each additional year up to 30 years, 1/20 for each year after 30.	45/60 of last salary.	40 per cent of pension of husband, minimum 300 marks (\$71.40), maximum 5,000 marks (\$1,190).	1/5 of the widow's pension to each fatherless child and 1/3 of the widow's pension to each orphan up to 21 years of age.	After 10 years' service; at any period of service if disability caused by sickness or injury in performance of duties.
.....do.....	.....do.....	.....do.....	.....do.....	Do.
35 per cent of last salary, first 10 years of service plus 2 per cent for each additional year up to 20 years, and 1 per cent for each year after 20.	75 per cent of last salary.	.....do.....	.....do.....	After status is permanent.
For first 10 years of service 40 per cent of last salary, plus each year through 40 years of service $1\frac{1}{2}$ per cent of salary up to 2,400 marks (\$571.20); $1\frac{1}{2}$ per cent of salary in excess of 2,400 marks (\$571.20).	8,000 marks (\$1,904)	50 per cent of pension of husband; minimum 350 marks (\$83.30); maximum 4,000 marks (\$952).	1/5 of the widow's pension to each fatherless child and 1/3 of the widow's pension to each orphan up to 18 years of age.	After 9 years' service; for disability caused by sickness or injury in performance of duties.
After 10 years and not more than 15 years' service 30 per cent of last salary with increases until after 39 years' service pension amounts to 80 per cent of salary. The law (Dec. 24, 1908) provided that pensions of 1,500 marks (\$357) or less be increased 12.5 per cent, of 1,501-3,000 marks (\$357.24-\$714) 10 per cent, and of over 3,000 marks (\$714) 7.5 per cent.	80 per cent of salaries in excess of 12,000 marks (\$2,856), full pension computed for 12,000 marks and for excess only half the pension.	1/5 of last salary of husband.	1/5 of the widow's pension to each fatherless child and 3/10 of the widow's pension to each orphan up to 18 years of age.	After 10 years' service; if permanently and totally disabled by accident in performance of duties $66\frac{2}{3}$ per cent of last salary; proportionate deductions for partial disability.

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LIST OF AMERICAN CITIES PROVIDING FOR MUNICIPAL PENSIONS.

[The Problem of Pensions, Federal, State, Municipal, and Industrial. New York, The National Civic Federation, 1916. p. 15.]

POPULATION 300,000 AND OVER.

City.	Population, 1910.	Employees covered.
New York.....	4,766,883	Policemen, firemen, teachers, municipal employees, and justices.
Chicago.....	2,185,233	Policemen, firemen, teachers, municipal employees, employees of house of correction, employees at the public library, and public school employees other than teachers.
Philadelphia.....	1,549,008	Policemen, firemen, teachers, and municipal employees.
St. Louis.....	687,029	Policemen, firemen, and teachers.
Boston.....	670,585	Policemen, firemen, teachers, and municipal employees.
Cleveland.....	560,663	Policemen, firemen, teachers, and sanitary police.
Baltimore.....	558,445	Policemen, firemen, and teachers.
Pittsburgh.....	533,905	Policemen, firemen, teachers, and municipal employees.
Detroit.....	465,766	Policemen, firemen, and teachers.
Buffalo.....	423,715	Do.
San Francisco.....	416,912	Policemen and firemen (teachers' pensions provided by State).
Milwaukee.....	373,857	Policemen, firemen, and teachers.
Cincinnati.....	363,591	Do.
Newark.....	347,469	Policemen and firemen (teachers and health-department employees' pensions provided by the State).
New Orleans.....	339,075	Policemen, firemen, and teachers.
Washington.....	331,069	Do.
Los Angeles.....	319,198	Policemen and firemen (teachers' pensions provided by State).
Minneapolis.....	301,408	Policemen, firemen, and teachers.

POPULATION 200,000 TO 300,000.

Jersey City.....	267,779	Policemen, firemen, and municipal employees.
Kansas City, Mo.....	248,381	Policemen and firemen.
Seattle.....	237,194	Policemen, firemen, and teachers.
Indianapolis.....	233,650	Do.
Providence.....	224,326	Do.
Louisville.....	223,928	Do.
Rochester.....	218,140	Do.
St. Paul.....	214,744	Do.
Denver.....	213,381	Do.
Portland, Oreg.....	207,214	Do.

POPULATION 100,000 TO 200,000.

Columbus.....	181,511	Policemen, firemen, and teachers.
Toledo.....	168,497	Do.
Atlanta.....	154,839	Municipal employees.
Oakland.....	150,174	Policemen, firemen, and municipal employees (teachers' pensions provided by the State.)
Worcester.....	145,986	Policemen and firemen (teachers' pensions provided by the State).
Syracuse.....	137,249	Policemen, firemen, and teachers.
New Haven.....	133,605	Policemen, firemen, teachers, and public-school employees.
Birmingham.....	132,683	Policemen and firemen.
Memphis.....	131,105	Pensions authorized, not established.
Scranton.....	129,867	Policemen, firemen, and teachers.
Richmond.....	127,628	Policemen, firemen, and municipal employees.
Paterson.....	125,600	Policemen and firemen (teachers' pensions provided by the State).
Omaha.....	124,096	Policemen, firemen, teachers, and public-library employees.
Fall River, Mass.....	119,295	Policemen.
Dayton.....	116,577	Policemen, firemen, and teachers.
Grand Rapids.....	112,571	Policemen and firemen.
Nashville.....	110,364	Do.
Lowell.....	106,294	Policemen, firemen, and municipal employees (teachers' pensions provided by the State).
Cambridge.....	104,839	Policemen and firemen (teachers' pensions provided by the State).
Spokane.....	104,402	Policemen and firemen.
Bridgeport.....	102,054	Do.
Albany.....	100,253	Policemen, firemen, and teachers.

POPULATION 50,000 TO 100,000.

Hartford.....	98,915	Policemen and firemen.
Trenton.....	96,815	Policemen, firemen, and teachers.
New Bedford.....	96,652	Policemen and firemen.

LIST OF AMERICAN CITIES PROVIDING FOR MUNICIPAL PENSIONS—Continued.

POPULATION 50,000 TO 100,000—Concluded.

City.	Population, 1910.	Employees covered.
San Antonio.....	14	No fund.
Reading.....	71	Teachers.
Camden.....	38	Policemen and firemen.
Salt Lake City.....	77	Teachers.
Dallas.....	04	Pensions authorized, not established.
Lynn.....	36	Policemen, firemen, teachers, and municipal employees.
Springfield, Mass.....	26	Policemen, firemen, and municipal employees.
Wilmington, Del.....	11	Policemen and teachers.
Des Moines.....	68	Policemen and firemen.
Tacoma.....	43	Do.
Yonkers.....	03	Policemen, firemen, teachers, and municipal employees.
Youngstown.....	66	Policemen and firemen.
Duluth.....	66	Policemen, firemen, and teachers.
St. Joseph, Mo.....	03	Firemen.
Troy.....	13	Policemen, fireman and teachers.
Utica.....	19	Do.
Elizabeth, N. J.....	09	Policemen and firemen.
Waterbury.....	41	Do.
Hoboken.....	24	Policemen, firemen, and teachers.
Akron.....	67	Policemen and firemen.
Wilkes-Barre.....	05	Teachers.
Peoria.....	50	Policemen and firemen.
Savannah.....	64	Do.
Oklahoma City.....	06	Firemen.
Harrisburg.....	86	Tr.....
Fort Wayne.....	03	Pc..... m and firemen.
Charleston.....	83	Pc..... m, firemen and teachers.
Portland, Me.....	71	Pc..... m and firemen.
Terre Haute.....	57	Pc..... m, firemen, and teachers.
Holyoke.....	30	Pc..... m and firemen.
Jacksonville.....	99	Pc..... m.
Brockton.....	78	Pc..... m, firemen, and municipal employees.
Bayonne, N. J.....	45	Fi.....
Passaic.....	73	Policemen, firemen, and teachers.
South Bend.....	84	Do.
Altoona.....	27	Teachers.
Allentown.....	13	Firemen.
Springfield, Ill.....	78	Policemen and firemen.
Pawtucket.....	51,822	Policemen.
Mobile.....	51,521	Policemen and firemen.
Saginaw.....	50,510	Do.

POPULATION 25,000 TO 50,000.

Binghamton.....	48,443	Firemen.
Sioux City.....	47,828	Policemen and firemen.
Lancaster, Pa.....	47,227	Firemen and teachers.
Springfield, Ohio.....	46,921	Policemen and firemen.
Atlantic City.....	46,150	Do.
Rockford, Ill.....	45,401	Do.
Bay City, Mich.....	45,166	Firemen.
York.....	44,750	Do.
Sacramento.....	44,696	Policemen and firemen.
Chattanooga.....	44,604	Do.
Malden, Mass.....	44,404	Firemen and municipal employees.
Haverhill.....	44,115	Policemen, firemen, and public-library employees.
New Britain, Conn.....	43,916	Policemen and firemen.
Salem, Mass.....	43,697	Policemen, firemen, and municipal employees.
Topeka.....	43,684	Policemen.
Davenport.....	43,028	Policemen and firemen.
Augusta, Ga.....	41,040	Do.
Berkeley.....	40,434	Do.
Superior.....	40,384	Do.
Newton, Mass.....	39,806	Policemen, firemen, and municipal employees.
San Diego.....	39,578	Policemen.
Chelsea.....	38,537	Policemen, firemen, and municipal employees.
Dubuque.....	38,494	Policemen and firemen.
Montgomery.....	38,136	Firemen.
Woonsocket, R. I.....	38,125	Policemen.
Racine.....	38,002	Policemen and firemen.
Fitchburg, Mass.....	37,826	Municipal employees.
Elmira.....	37,178	Policemen, firemen, and teachers.
Galveston.....	36,981	Policemen and firemen.
Quincy, Ill.....	36,587	Policemen.
Hamilton.....	35,279	Policemen, firemen, and teachers.
Joliet.....	34,670	Firemen.

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LIST OF AMERICAN CITIES PROVIDING FOR MUNICIPAL PENSIONS—Concluded.

POPULATION 25,000 TO 50,000—Concluded.

City.	Population, 1910.	Employees covered.
Auburn, N. Y.....	34,668	Policemen, firemen, and teachers.
East Orange.....	34,371	Policemen and firemen.
Cedar Rapids.....	32,811	Do.
Perth Amboy.....	32,121	Policemen and teachers.
Pittsfield.....	32,121	Do.
Jackson, Mich.....	31,433	Policemen and firemen.
Jamestown, N. Y.....	31,297	Firemen.
Mt. Vernon, N. Y.....	30,919	Policemen, firemen, and teachers.
Lima, Ohio.....	30,508	Firemen.
Niagara Falls.....	30,445	Policemen, firemen, and teachers.
La Crosse.....	30,417	Do.
Newport, Ky.....	30,309	Policemen and teachers.
Aurora, Ill.....	29,807	Policemen and firemen.
Council Bluffs.....	29,292	Do.
Colorado Springs.....	29,078	Do.
Lorain, Ohio.....	28,883	Do.
New Rochelle.....	28,867	Policemen, firemen, and teachers.
Zanesville.....	28,026	Policemen and firemen.
Shreveport, La.....	28,015	Firemen.
Poughkeepsie.....	27,936	Policemen and teachers.
Waltham.....	27,834	Policemen, firemen, teachers, and municipal employees.
Newburgh, N. Y.....	27,805	Policemen and teachers.
Brookline.....	27,792	Policemen, firemen, teachers, and municipal employees.
Meriden, Conn.....	27,265	Policemen.
Watertown, N. Y.....	26,730	Policemen, firemen, and teachers.
Waterloo, Iowa.....	26,693	Policemen and firemen.
Elgin, Ill.....	25,976	Do.
Kingston, N. Y.....	25,908	Policemen.
Bloomington.....	25,768	Policemen and firemen.
Clinton.....	25,577	Do.
Madison, Wis.....	25,531	Do.
Chicopee, Mass.....	25,401	Policemen.
Stamford.....	25,138	Policemen and firemen.

PRIVATE COMPANIES IN THE UNITED STATES HAVING OLD-AGE PENSION SYSTEMS.

Railroad and transportation companies.

Atchison, Topeka & Santa Fe Railway Co., Chicago, Ill.
 Atlantic Coast Line Railroad Co., Wilmington, N. C.
 Baltimore & Ohio Railroad, Baltimore, Md.
 Boston & Maine Railroad, Boston, Mass.
 Buffalo, Rochester & Pittsburgh Railway Co., Rochester, N. Y.
 Canadian Pacific Railway Co., Montreal, Canada.
 Chicago & North Western Railway Co., Chicago, Ill.
 Chicago, Burlington & Quincy Railroad Co., Chicago, Ill.
 Chicago, Milwaukee & St. Paul Railway, Chicago, Ill.
 Chicago, St. Paul, Minneapolis & Omaha Railway Co., St. Paul, Minn.
 Delaware, Lackawanna & Western Railroad Co., New York, N. Y.
 Grand Trunk Railway System, Montreal, Canada.
 Houston & Texas Central Railroad, Houston, Texas.
 Illinois Central Railroad Co., Chicago, Ill.
 New York Central System, New York, N. Y.
 New York, Chicago & St. Louis Railroad Co., Cleveland, Ohio.
 New York, New Haven & Hartford Railroad Co., New Haven, Conn.
 Oregon Short Line Railroad Co., Salt Lake City, Utah.
 Oregon-Washington Railroad & Navigation Co., Portland, Oreg.
 Pennsylvania Railroad Co., Philadelphia, Pa.
 Philadelphia & Reading Railway Co., Philadelphia, Pa.

Pittsburgh Steamship Co., Pittsburgh, Pa.
 Pullman Co., Chicago, Ill.
 Rock Island Lines, Chicago, Ill.
 San Antonio & Aransas Pass Railway Co., San Antonio, Tex.
 Southern Pacific Co., San Francisco, Cal.
 Union Pacific Railroad Co., Omaha, Nebr.

Telephone and telegraph companies.

American Telephone & Telegraph Co., New York, N. Y.
 Cincinnati & Suburban Telephone Co., Cincinnati, Ohio.
 New England Telephone & Telegraph Co., Boston, Mass.
 Postal Telegraph Co., New York, N. Y.
 Western Union Telegraph Co., New York, N. Y.

Other public service companies.

Boston Consolidated Gas Co.
 Chicopee Gas Light Co.
 Consolidated Gas Co., New York.
 Exeter & Hampton Electric Co.
 Exeter, Hampton & Amesbury Street Railway.
 Exeter Railway & Lighting Co.
 Fitchburg Gas & Electric Co.
 Haverhill Electric Co.
 Lehigh Valley Transit Co., Allentown, Pa.
 Malden & Melrose Gas Light Co.
 Malden Electric Co.
 New York Railways Co., New York, N. Y.
 Niagara Falls Power Co., Niagara Falls, N. Y.
 People's Gas & Electric Co.
 Philadelphia Electric Co.
 Salem Electric Light Co.
 Springfield Gas-Light Co.
 Suburban Gas & Electric Co.
 Washington-Virginia Railway Co., Washington, D. C.

Banks.

First National Bank, Chicago, Ill.
 Guaranty Trust Co., New York City.
 National Bank of Commerce, New York City.
 National City Bank, New York City.

Insurance companies.

Equitable Life Assurance Society, New York, N. Y.
 Metropolitan Life Insurance Co., New York, N. Y.
 Prudential Insurance Co. of America, Newark, N. J.

Manufacturing and miscellaneous companies.

Allis-Chalmers Manufacturing Co., Milwaukee, Wis.
 American Brass Co., Waterbury, Conn.
 American Express Co., New York, N. Y.
 American Sugar Refining Co., New York, N. Y.
 American Tar Co.
 Armour & Co., Chicago, Ill.
 Bancroft, Jos., & Sons Co., Wilmington, Del.
 Blount Plow Works, Evansville, Ind.
 Brill, J. G., Co., Philadelphia, Pa.

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Butler Bros., Chicago, Ill.
Calumet & Hecla Mining Co., Calumet, Mich.
Cambria Steel Co., Johnstown, Pa. (consolidated with Midvale Steel Co., 1915).
Case, J. I., Threshing Machine Co., Racine, Wis.
Cheney Bros., South Manchester, Conn.
Chicopee Manufacturing Co., Boston, Mass.
Cleveland-Clipp Iron Co., Ishpeming, Mich.
Crane Co., Chicago, Ill.
Cumberland Mills, Westbrook, Me.
Deere & Co., Moline, Ill.
Dolge, Alfred C., & Son, Dolgeville, N. Y.
Du Pont de Nemours Powder Co., Wilmington, Del.
Filer & Stowell Co., Milwaukee, Wis.
General Electric Co., Schenectady, N. Y.
General Fire Extinguisher Co., Providence, R. I.
Gilbert & Barker Mfg. Co., Springfield, Mass.
Goodrich, B. F., Tire & Rubber Co., Akron, Ohio.
Gorham Manufacturing Co., Providence, R. I.
Hibbard, Spencer, Bartlett & Co., Chicago, Ill.
Huyck, F. C., & Sons, Albany, N. Y.
International Harvester Co., Chicago, Ill.
Kimberly-Clark Co., Appleton, Wis.
La Crosse Plow Co., La Crosse, Wis.
Midvale Steel Co., Philadelphia, Pa.
Morris & Co., Chicago, Ill.
Murphy Varnish Co., Newark, N. J.
National Carbon Co., Cleveland, Ohio.
National Lead Co., New York, N. Y.
North Star Mines Co., New York, N. Y.
Pittsburgh Coal Co., Pittsburgh, Pa.
Procter & Gamble Co., Cincinnati, Ohio.
Rhode Island Co. (The), Providence, R. I.
Sherwin-Williams Co., Cleveland, Ohio.
Simonds Manufacturing Co., Pittsfield, Mass.
Standard Oil Co., New York, N. Y.
Talbot Mills, North Billerica, Mass.
Tenney & Co., Chas. H., Boston, Mass.
United Cigar Stores Co., New York, N. Y.
United States Brewers' Association, New York, N. Y.
United States Steel Corporation, New York, N. Y.
Van Brunt Manufacturing Co., Horicon, Wis.
Vermont Marble Co., Proctor, Vt.
Victor Talking Machine Co., Camden, N. J.
Virginia Bridge & Iron Co. (The), Roanoke, Va.
Wells, Fargo & Co., New York, N. Y.
Western Electric Co., New York, N. Y.
Westinghouse Air Brake Co., East Pittsburgh, Pa.
Williams, J. H., & Co., Brooklyn, N. Y.
Winchester Repeating Arms Co., New Haven, Conn.
Witherbee, Sherman & Co. (Inc.), Port Henry, N. Y.

CIVIL-SERVICE RETIREMENT IN MASSACHUSETTS.**INTRODUCTION.**

The State of Massachusetts in 1909 took special cognizance of the problem of retiring its civil-service employees by the appointment of a commission which reported in 1910. The result of that commission's report was the enactment, in 1911, of a measure providing for retirement of superannuated employees. Again in 1914¹ a commission was appointed which considered the problem in the light of developments under the existing legislation. This commission characterized the large number and variety of pension and retirement laws in force in the State at that time as startling. These laws were found to differ in administrative features and application, and even in fundamental principles. The commission recommended a drastic overhauling of these laws, particularly with a view to consolidating the different administrative features.

The Massachusetts law relating to the retirement of civil employees in the State service was enacted in 1911 and became applicable on June 1, 1912. The act is based upon the principle of compulsory savings on the part of the employee, and of the State being economically benefited by the withdrawal from the service of superannuated or incapacitated employees. The plan is therefore partially a contributory one and partially a straight pension scheme, each party providing an equal amount of the retirement allowance.

The system is compulsory for all employees of the Commonwealth who enter the service after the establishment of the act, and elective to persons who were employees before its establishment.

THE RETIREMENT ASSOCIATION.

All permanent and regular State employees are enrolled by a special board of retirement as members of a State retirement association. But employees of the State who are provided for by special pension legislation are excluded from membership, as are all employees who enter the service of the State after having passed the age of 55 years, and also officers elected by popular vote. Members become such upon completing 90 days of permanent service following the six months' probationary period to which all civil-service employees are subject. The board has given the term "permanent and regular employees" explicit definition, and has held that no person will be permitted to remain in the continuous employ of one State department over one year without becoming a member of the retirement association. Temporary and provisional employees become members of the association at the end of one year of continuous

¹ Report of the Massachusetts Commission on Pensions, Mar. 16, 1914. Boston [1914]. 345 pp.

service; all employees who do not work through the whole year, but are employed only recurrently for a substantial part of the year, become members of the association one year from the date of first employment; and officials appointed by the governor for a definite term are considered permanent and regular employees and become members of the association if service by the State is their "only or principal" employment.¹

BOARD OF RETIREMENT.

The State board of retirement is composed of three members, the State treasurer, one member elected by the members of the retirement association, and a third elected by these two. The board is unpaid, but is authorized to secure and pay for adequate clerical help. It makes all necessary rules and regulations; it may determine the percentage of salary which an employee shall contribute, subject only to maximum and minimum amounts provided in the law.

FUNDS OF THE SYSTEM.

Two funds are created to meet the expenses of the system: (1) Expense and contingent fund appropriated annually by the legislature to defray the expenses of administration; (2) annuity and pension fund consisting of deductions from salaries of employees and amounts contributed by the Commonwealth in an equal sum.

The State treasurer has charge of the funds subject to the approval of the board of retirement, while the insurance commissioner prescribes and supervises the methods of bookkeeping, and inspects and examines accounts so as to secure compliance with the law.

CONTRIBUTIONS OF MEMBERS.

The board of retirement is authorized by law to deduct not less than 1 per cent nor more than 5 per cent of the wages or salary of members of the association for the purchase of their retiring allowances. Employees who receive in excess of \$30 a week can not be assessed for contributions on the excess above that amount. Although the board was given power to fix a maximum and minimum amount and to classify the employees and to establish different rates for different classes, it has nevertheless fixed a uniform rate of 3 per cent for deductions from salaries, unless the employee elects to contribute 5 per cent.

The amount contributed by each employee is deducted from each month's salary and paid over to the State treasurer. Wages are held to include only cash receipts.

¹ The Retirement System for Employees of the Commonwealth. Circular explanatory of the provisions of ch. 532, acts of the year 1911, and acts in amendment thereof and addition thereto. Boston, 1914. p. 6.

If an employee leaves the service before becoming eligible to a retirement allowance, his contributions are returned to him with interest at 3 per cent. If he dies before retirement a refund is made to his legal representative or other person appearing to be entitled to it.

CONDITIONS OF RETIREMENT.

Voluntary retirement is permitted to an employee at the age of 60 after 15 years of continuous service; compulsory retirement may take place at the age of 70 years; regardless of age, retirement is allowed after 35 years of continuous service or for permanent disability after 15 years of service. In the case of members of the association related as husband and wife, if one of the two retires, or is retired, the other has the right also to retire. Any employee of the State on January 1, 1912, who did not elect to become a member of the association and who had reached the age of 55 years on June 1, 1912, may, under an amendment, be retired for the good of the service at any time upon the minimum pension of \$200 per year.

ANNUITIES AND PENSIONS.

The retirement allowance consists of two parts: (1) A life annuity payable monthly in such amounts as the sum of the deposits with regular interest have produced at the time of retirement; (2) a pension for life payable monthly out of the fund contributed by the State and equal to the above annuity. A person retired may receive less than this amount with the provision that upon his death the difference with interest between what he might have received and what he actually received will be paid to his legal representative. A supplementary pension may be paid upon certain conditions, namely, if an employee is retired at the age of 60 years or later, after 15 years of continuous service, or at this same age without 15 years of service, provided he was 55 years old at the time of the establishment of the system, or if he retires or is retired after 35 years of continuous service without regard to his age. This supplementary or extra pension continues for life and is equal to the amount of the annuity and the pension to which he would have been entitled if the retirement system had been in operation when he entered the service, and if he had contributed from that date to the date of its establishment at the same rate as that adopted by the board of retirement.

An employee who elected not to become a member of the association, but having reached the age of 55 years at the time of the establishment of the system, may be retired on the minimum pension of \$200.

The maximum pension is fixed at one-half the amount of the average salary or wages received by the retired employee during the last 10 years of his service. If by his rate of contribution an employee

has accumulated a sum more than sufficient to obtain an annuity equal to one-fourth of his average salary or wages, which with the addition of an equal amount by the State would produce an annuity and pension combined in excess of the legal maximum, he is paid such excess in a lump sum at the time of the first payment on his retirement allowance.

MISCELLANEOUS PROVISIONS.

The actuarial features of the system, the prescribing of mortality tables, the establishment of rates of interest in connection therewith, methods of bookkeeping, etc., are intrusted to the insurance commissioner, and to this officer is also assigned the general supervision of the system, and the observance of the law by the board of retirement.

The funds of the system are exempt from taxation and the rights of a member to any part of such funds are exempt from taxation, the operation of bankruptcy laws, adjustments of law, or any court process, and can not be assigned by such member.

AMENDMENTS AND REFORMS PROPOSED.

It has taken four years for the State to build up this system of retirement legislation as applicable only to a restricted class of employees in the State government. In 1912, one year after the passage of the original act, the system was amended in some of its most important features, such, for instance, as in the matter of computing of continuous service, by extending the time of election for members to come in under the act, by providing for those who were employed partly by a county and partly by the State, by providing for the payment of the excess beyond the amount required to secure an annuity in the amount fixed by the law, by changing the form of investment of the funds, and by providing for the retirement of husband and wife at the same time if both are members. The amendments of 1913 were minor amendments, while an amendment in 1914 provided for the retirement of persons permanently disabled in the service, but only after 15 years of continuous service.

The commission on pensions of 1914, after an extended analysis of the existing legislation, and an actuarial study of the Boston pension funds in particular, recommended the repeal of all pension laws in force in the State except that for supreme court justices, and drafted a bill in pursuance of that purpose, drawing the administration of the whole pension system of the State under one head. It hoped thereby that concealed taxation would be avoided and equality established among all public servants. Referring to the fact that about 100 new bills relating to pensions were introduced into the legislature in Massachusetts in 1914, it stated that "if the solution is not furnished new pension legislation will complicate the situation year by year, making future effort for sound economic legislation well-nigh hopeless."

STATISTICS OF OPERATION.

Since the law become operative, on June 1, 1912, according to the latest report of the State board of retirement¹ 133 employees have been retired; but retirement allowances were being paid at that time to 119 employees, 13 annuitants and 1 nonmember having died since retirement. Of the number in question, 43 had been retired at the age of 70 or over, 3 for permanent disability, and 1 nonmember for the good of the service upon the request of the department in which he was employed, while 72 had retired of their own desire.

The amount paid to retired employees during the year ending December 1, 1915, as pensions, was \$30,433.91, as compared with \$24,918.58 during the preceding fiscal year; the largest yearly amount payable to any individual was \$905.14. Of the 119 retired employees, 54 were in receipt of the maximum retirement allowance, namely, one-half of the average cash salary for the 10 years preceding retirement. The average annual retirement allowance paid during the year was \$284.79, which is \$84.79 above the minimum payable.

The amount refunded to members who had left the service was \$23,057.30, and the amount refunded to the heirs or the estates of deceased members was \$2,674.81.

The investments of the funds which support the retirement allowances earned an average rate of income, during the year, of 4.17 per cent.

In an earlier report² the board emphasizes the benefit of the compulsory savings feature of the act, noting that the significance of this feature will become more and more evident as the system continues in operation. The board stated in this connection:

Evidence constantly reaches the board that members look upon this feature of the retirement system with favor, and are gratified that they have been compelled to adopt habits of saving before unknown to them. Among the benefits of the retirement system this is by no means the least, and its value is bound to be increasingly felt as the size of the individual accounts increases with the age of the association.

IMMIGRATION IN MARCH, 1916.

During the month of March there were 27,586 immigrant aliens admitted to the United States, being 2,846, or 11.5 per cent, more than in the preceding month. Compared with March, 1915, there was an increase of 8,323, or 43.2 per cent, in the number admitted; but there were 65,035, or 70.2 per cent, fewer persons admitted than in March, 1914. The following table shows the total number of immigrant aliens admitted during January, February, March, and April for 1914, 1915, and 1916.

¹ Report of the State Board of Retirement, January, 1916. Boston, 1916. p. 8.

² Report of the State Board of Retirement, January, 1915. Boston, 1915. p. 11.

118 MONTHLY REVIEW OF THE BUREAU OF LABOR STATISTICS.

IMMIGRANT ALIENS ADMITTED INTO THE UNITED STATES IN SPECIFIED MONTHS,
1914, 1915, AND 1916.

Month.	1914	1915	1916
January.....	44,708	15,481	17,293
February.....	46,873	13,873	24,740
March.....	92,621	19,263	27,586
April.....	119,885	24,532	30,560

It is noted that the largest number of immigrants for some months past came from Italy, England, Mexico, and the Scandinavian countries, in the order named.

Classified by races, the immigrant aliens admitted into and emigrant aliens departing from the United States during March, 1915 and 1916, were as follows:

IMMIGRANT ALIENS ADMITTED INTO AND EMIGRANT ALIENS DEPARTING FROM
THE UNITED STATES, MARCH, 1915 AND 1916.

Race.	Admitted.		Departed.	
	March, 1915.	March, 1916.	March, 1915.	March, 1916.
African (black).....	159	148	69	97
Armenian.....	63	139	18	6
Bohemian and Moravian.....	81	56	1	3
Bulgarian, Servian, Montenegrin.....	316	342	145	1
Chinese.....	135	126	86	169
Croatian and Slavonian.....	53	92	7	8
Cuban.....	85	98	113	78
Dalmatian, Bosnian, and Herzegovinian.....	2	5	.....	.....
Dutch and Flemish.....	499	456	67	40
East Indian.....	5	4	9	2
English.....	2,243	2,584	538	413
Finnish.....	250	547	55	27
French.....	820	1,909	173	176
German.....	928	1,070	71	49
Greek.....	1,488	2,913	555	338
Hebrew.....	733	1,210	39	3
Irish.....	1,097	1,131	142	114
Italian (north).....	670	426	350	97
Italian (south).....	3,118	3,810	2,388	312
Japanese.....	662	647	52	53
Korean.....	5	23	1	2
Lithuanian.....	57	64	7	.....
Magyar.....	30	95	17	39
Mexican.....	996	2,299	20	24
Pacific Islander.....	.....	.....	.....	.....
Polish.....	163	457	118	10
Portuguese.....	434	1,107	90	135
Roumanian.....	41	100	9	5
Russian.....	155	559	607	202
Ruthenian (Russniak).....	124	69	2	1
Scandinavian.....	1,885	2,033	159	207
Scotch.....	943	989	199	101
Slovak.....	6	46	8	5
Spanish.....	435	904	773	176
Spanish-American.....	173	148	39	38
Syrian.....	76	39	9	16
Turkish.....	7	5	3	1
Welsh.....	96	61	17	11
West Indian (except Cuban).....	55	36	17	12
Other peoples.....	175	839	49	42
Not specified.....	.....	.....	733	473
Total.....	19,263	27,586	7,755	3,485
Per cent increase, 1916.....	.....	43.2	.....	¹ 55.1

¹ Decrease.

OFFICIAL REPORTS RELATING TO LABOR.

UNITED STATES..

Alabama.—*Inspector of coal mines. Annual report of coal mines, State of Alabama, 1914. Birmingham [1915]. 100 pp.*

During the year 263 mines were in operation, employing 15,887 miners, 4,987 inside day men and 3,053 outside men, a total of 23,927. Of the mines 104 were operated by slopes, 12 by shafts, and 147 by drifts; 165 were pick mines and 40 were machine mines. The total tonnage was 15,525,903. Picked coal represented 73.7 per cent of the total output. There were 126 fatalities due to accidents, being 5.26 for each 1,000 men employed and 1 to every 123,222 tons of coal raised.

A description of methods, ventilation, precautionary measures employed, and conditions of each mine is given in detail.

A safety association was formed in 1914 for the purpose among others of instructing the workers in their occupation, improving rescue work, securing systematic inspection, and improving working conditions in the mines.

Arizona.—*State Mine Inspector. Fourth annual report for the year ending September 30, 1915. [Phoenix, 1916?] 72 pp.*

"According to the reports received by the inspector of mines, and presented in this paper, the number of men killed in and about the mines in the State of Arizona during the year 1915 was 49, as compared with 62 in 1914. The number of men employed in and about the mines during 1915 was 13,598 as compared with 9,422 in 1914. The fatality rate for 1915 was 3.6 per 1,000 men employed. It will be noticed that the fatal accidents have been greatly decreased when compared with 1914."

Arkansas.—*Bureau of Mines, Manufactures, and Agriculture. Eleventh biennial report, 1913, 1914. [No place, no date.] 366 pp.*

A report dealing with the mineral, industrial, and agricultural resources of the State. The first 64 pages are also printed separately.

California.—*Laws of interest to women and children; supplement 1913-1915. Compiled by the California State Library. Sacramento, 1916. 96 pp.*

The preface makes clear the nature of this booklet:

"This volume supplements, and should be used in connection with the first one on the subject published by the California State Library in 1912. The order of contents is that followed in the original volume. All amendments to the laws which come within the scope of the compilation and which were passed at the 1913 and 1915 sessions of the legislature are included, as well as several new enactments. These are of unusual interest to the women of the State as they were instrumental in having some of these laws, at least, placed on the statute books."

Kentucky.—*Department of Mines. Annual report for 1915, part 3: Methods of mining and preparation of coals for market in inspection district No. 3. [Frankfort, 1916.] 108 pp., plates.*

A description of mines in operation and a report on systems of mining, ventilation, drainage, roof protection, prevention of dust and gas accumulation and of fires; methods of mining, haulage, use of electricity, coal raising, tipples, grading and screening; and the preparation of so-called Elkhorn by-product coal, etc.

Massachusetts.—*Board of Retirement. Report of the State Board of Retirement, January, 1916. Boston, 1916. 12 pp.*

Contains the reports of the operations of the board in the payment of retirement allowances to superannuated employees of certain of the State departments during the year 1915. The report has been used in connection with a short article on civil-service retirement in Massachusetts on pages 113 to 117 of this number of the REVIEW.

Massachusetts.—*Minimum Wage Commission. Third annual report for the year ending December 31, 1915. Boston, 1916. 143 pp.*

The summary of this document will be found on page 57 of this number of the REVIEW.

————— *Wages of women in hosiery and knit-goods factories in Massachusetts. Boston, 1916. 37 pp. (Bulletin No. 10, January, 1916.)*

————— *Wages of women in paper-box factories in Massachusetts. Boston, 1915. 38 pp. (Bulletin No. 8, September, 1915.)*

The data contained in these two bulletins have been used in connection with an article on page 59 in this number of the REVIEW.

Michigan.—*Inspector of Mines. Dickinson County. Annual report from September 30, 1914, to September 30, 1915. [No place, no date.] 27 pp.*

————— *Gogebic County. Annual reports, September 1, 1913, to September 1, 1914; September 1, 1914, to September 1, 1915. [No place, no date.] 68 pp.*

These reports are principally descriptions of particular mine accidents in these counties. The report for Gogebic County contains instructions for the prevention of accidents.

New Jersey.—*Commission to investigate pensions for State and municipal officers and employees. Report; tabulation of pension laws of New Jersey, with additional New Jersey pension laws. [No place, no date.] 14 pp.*

"We agree with the findings of the Massachusetts commission [of 1914] that the retirement of the superannuated is necessary to improve the efficiency of the public service and that this can be the only legal justification for a pension system."

The commission did not recommend the enactment of any law for a pension system, but presented certain principles for future pension legislation: (1) that pensions be based on the average compensation of employees during at least the last 10 years of service; (2) that age of retirement be not less than 65 years except in cases of firemen and policemen; (3) that a minimum service of 20 years be required; and (4) that disability be compensated separately under the workmen's compensation act.

New Mexico.—*Department of Industrial Education. Annual report of the State director of industrial education to the superintendent of public instruction, 1915. East Las Vegas, N. Mex. 218 pp., illus.*

This constitutes the second annual report of the State director of industrial education and covers the period January 1, 1914, to June 30, 1915. The report consists of an account of the development and present status of industrial education, the organization of an industrial club, and other related subjects.

————— *State Mine Inspector. Fourth annual report for the year ending October 31, 1915. Gallup. 46 pp.*

The number of mines in operation was 53, employing 4,609 persons and producing 3,858,554 tons of coal. There were 980 coke ovens in operation, employing 255 persons. The approximate value of production was \$6,716,327, of which \$1,199,777 was of coke. There were 21 fatal and 185 nonfatal accidents reported for the year.

The report contains a reproduction of the mining laws of the State.

New York City.—*Commission on Pensions. Report on the teachers' retirement fund. New York, 1915. 177 pp.*

An outline of the history of the teacher's pension system and the development of the fund, present conditions, and recommendations for establishing an equitable and financially sound retirement fund.

The city has to meet obligations legally incurred for the retirement of 10,000 policemen and 5,000 firemen and assist in financing funds for the retirement of several other groups of employees, besides concerning itself in the retirement of 20,000 teachers; and there still remains unprovided for the great bulk of the city employees whose pensions are paid from the public funds upon incapacity after 30 years of service. If under these conditions the entire burden of teacher's retirement be placed upon the city, the cost would become burdensome and endanger the proposed benefits to be derived from the undertaking.

The following table is presented to show the relation of pensions to salaries as indicated by the city's experience with different retirement funds, 1905 to 1914:

GROWTH OF PENSION DEMANDS.

Pension fund.	Year established.	Proportion of pensions to pay roll during the years indicated.									
		1905	1906	1907	1908	1909	1910	1911	1912	1913	1914
Police.....	1857	11.35	11.31	12.11	12.09	12.17	12.35	13.04	14.46	15.73	16.16
Fire department.....	1871	11.81	11.32	11.33	11.29	11.59	12.09	13.05	14.38	13.85	14.08
Teachers' retirement.....	1894	.....	3.65	3.87	3.82	3.92	4.02	4.09	3.82	4.10	4.15
Health department.....	1894	1.60	1.50	2.33	2.31	2.62	2.69	2.82	3.25	3.86	5.92
Street-cleaning department.....	1911	.....	.....	.....	.....	.....	.....	.....	.38	2.44	3.49

The present plan of 1 per cent contribution from teachers' salaries will be utterly inadequate to meet the requirements of the system now in existence. The fund has been in existence for 21 years, with an ever-increasing deficiency. An appraisal made on the basis of the 1,521 pensions already in force and the value of prospective pensions to the teachers in the service on the close of the year June 30, 1914, showed a deficiency of \$54,743,320; that is to say, a reserve of that amount at 4 per cent compound interest would be required, together with other forms of income, in order to meet the prospective payments.

Attention is called to the necessity of an immediate reorganization and recommendations to that effect are made.

Actuarial tables were prepared covering all important phases of a retirement scheme.

The commission recommends the assessing of contributions, upon persons now in the service, ranging from 2.63 to 8 per cent, based upon age, sex, and length of service; upon new entrants, of from 2.52 to 4.53 per cent, based upon age and sex; and a permanent subsidy by the city of 3 per cent on annual pay rolls, together with an annual deficiency appropriation of \$1,233,220 for the next 60 years to wipe out the present deficiency.

Ohio (Cleveland).—*Department of Public Welfare. Annual report of the division of employment and immigration, department of public welfare of the city of Cleveland, for the year ending December 31, 1914. [Cleveland, 1915.] 31 pp.*

——— *Report, 1915. [Cleveland, 1916.] Typewritten letterhead.*

The division of employment and immigration within the department of public welfare consists of the bureau of immigration, bureau of employment, and the bureau of vocational guidance. It is a consolidation of previously existing private and public agencies. The employment bureau is better known as the labor exchange, which is a State-city free employment bureau. The report for 1915 here listed covers only the work of the immigration bureau within the division.

"The real work of this division of employment is now just beginning, for it must work out the problem of how to organize the labor market to save the great loss of money and time to both employer and employee because of our present disorganized method of handling labor. In addition to this, the exchange will be compelled to study the great seasonal industries, to find wherein the mass of labor which each industry has shall be so regulated that it may not become a burden on the community when these seasonal trades close. Through not only its study but its efficient handling of men the State-city labor exchange is destined to become a powerful factor for good in community life—not during special crises, when the number of men employed is large, but during ordinary times, when business is normal. Through its records of the individual men who are given employment it will raise the type of labor to a marked degree, each man knowing that when he receives good marks from his former employer this will mean that a position will be more easily secured the next time he is out of work. This has been found to work out now in a practical way and will work out to a greater degree in the future as the records become more accurate and the references of the different men are looked up more thoroughly."

The vocational bureau is making special effort to direct young people into lines of employment which should have a future for them, and the employment bureau has been a factor in solving the problem of unemployment. A separate office has been opened for women and girls.

During its five months of existence 47,858 applications, including reregistrations, for work have been received by the exchange, 8,092 calls for help have been filed, and work secured for 6,608 persons. In the last four months the girls' division has placed 356 persons 16 to 21 years of age.

The immigration bureau meets arriving immigrants, assists them in adopting the best method of reaching their destinations, securing employment, etc., and maintains educational and citizenship classes, among other activities.

Pennsylvania.—*Penal Commission. Employment and compensation of prisoners in Pennsylvania. Report of the penal commission appointed under authority of an act approved July 25, 1915. Harrisburg, 1915. 112 pp.*

The commission was created to inquire into the advisability of amending the penal laws of Pennsylvania so as to provide for the employment of all inmates of all penal institutions, to consider the question of compensating prisoners for their work, and to report on the question of utilizing the products in the penal and charitable institutions of the State.

The commission submitted its report February 15, 1915, and in conclusion suggested the desirability of continuing its work for two years longer because of the limited time at its disposal.

The commission embodied its recommendations in a series of draft laws printed as Part II of its report. These draft laws provide for:

(1) Employment under the State-use system of the inmates of the Eastern Penitentiary, Western Penitentiary, and the Pennsylvania Industrial Reformatory at Huntingdon; (2) purchase of a moderate-sized farm to be used in connection with the Eastern Penitentiary; (3) opportunity for the county to employ the inmates at its institutions in the production of goods for the use of such county institutions or their inmates; (4) creation of six industrial farms for misdemeanants and the employment and compensation of the inmates; (5) modification of the existing wage system, as far as it is applicable to the Eastern Penitentiary, the Western Penitentiary, and the Huntingdon Reformatory, in such manner that the prisoner shall be credited with wages for the time he is actually engaged in work (the rate is to be regulated by the prison labor commission, but not to be less, in any case, than 10 cents nor over 50 cents for each day's work; three-fourths of the amount credited to a prisoner is to constitute a relief fund for such prisoner or his dependents); (6) creation of the administrative machinery necessary in the form of a penal labor commission for the introduction of the State-use system in the three institutions already mentioned.

Panama Canal Zone.—*Manual of information concerning employees for the Panama Canal service, revised April 27, 1916. Washington, 1916. 30 pp.*

Porto Rico.—*Department of Labor, Charities, and Correction. Fourth annual report. San Juan, 1916. 41 pp.*

A summary of the legislation enacted in 1913, 1914, and 1915, and of the agricultural strikes of 1915 and 1916, with recommendations of needed legislation on the following subjects: Homesteads; workmen's compensation; boiler inspection; minimum wages for women; legal protection for wages of workers; arbitration of labor disputes; housing of workmen and a minimum wage law for common labor on public works; right of organization; subsidy and tax exemption to encourage the establishment of a textile mill.

Activities of the inspection service and the results of investigations of complaints of refusal of employer to pay the wages are also given. Employment agency reports for the year ending December 31, 1915, show 473 applications for work and 217 persons recommended for positions, 72 having received employment.

The establishment of industrial schools is separately recommended.

United States.—*Bureau of Mines (Department of the Interior). Coal-mine fatalities in the United States, 1915. Washington, 1916. 80 pp.*

In addition to statistics of coal-mine fatalities in 1915 with comparisons for former years, this pamphlet contains a list of permissible explosives, lamps, and motors tested prior to January 1, 1916. A digest of its contents will appear in a future number of the REVIEW.

— *Department of Agriculture Yearbook, 1915. Washington, 1916. 616 pp.*

Contains principally a collection of monographs on different agricultural topics which have been of more or less importance during the year. In connection with its statistical tables, contained in the appendix, this volume introduces a table, prepared for the first time, showing the number of persons engaged in agriculture in various countries.

NUMBER OF PERSONS ENGAGED IN AGRICULTURE IN VARIOUS COUNTRIES.

Country.	Year.	Males.		Females.		Total persons engaged in agriculture.	
		Number.	Per cent of males in all occupations.	Number.	Per cent of females in all occupations.	Number.	Per cent of persons in all occupations.
United States ¹	1910	10,582,039	35.2	1,806,584	22.4	12,388,623	32.5
Algeria.....	1881	636,078	74.8	91,602	53.7	727,680	71.3
Argentina.....	1895	318,149	28.0	67,174	13.4	385,323	23.6
Australia.....	1901	377,626	29.5	39,029	11.1	416,655	25.6
Austria-Hungary.....	1900	8,185,250	58.5	5,935,805	70.3	14,121,055	63.0
Belgium.....	1900	633,665	23.6	163,707	17.6	697,372	21.9
Bolivia.....	1900					564,009	43.5
British India.....	1901	63,026,365	67.3	27,867,210	66.5	90,893,575	67.1
British North Borneo.....	1901					32,892	64.2
Bulgaria.....	1905	895,206	73.3	837,406	94.9	1,732,612	82.4
Canada.....	1901	707,997	45.4	8,940	3.7	716,937	39.9
Ceylon.....	1901	745,074	65.0	318,551	65.4	1,063,625	65.1
Chile.....	1907	448,546	50.3	21,877	6.2	470,423	37.7
Cuba.....	1907	364,821	52.2	3,110	4.2	367,921	47.6
Cyprus.....	1901	33,611	62.8	2,757	20.8	36,368	54.5
Denmark.....	1911	386,016	45.7	110,169	28.5	496,185	40.3
Egypt.....	1907	2,258,005	67.2	57,144	33.3	2,315,149	65.6
Federated Malay States.....	1901	115,027	28.2	52,324	82.7	167,351	35.5
Finland.....	1900	321,538	51.4	102,008	39.6	423,546	48.9
Formosa.....	1905	763,456	70.6	263,664	82.4	1,027,120	73.3
France.....	1906	5,452,392	41.9	3,324,661	43.2	8,777,053	42.4
Germany.....	1907	5,146,723	27.7	4,585,749	48.3	9,732,472	34.6
Greece.....	1907	321,120	47.3	6,972	12.2	328,092	44.6
Grenada.....	1901	8,816	57.1	7,722	49.7	16,538	53.4
Italy.....	1901	6,370,277	57.9	3,196,063	60.5	9,566,340	58.8
Jamaica.....	1911					271,493	66.1
Malta and Gozo.....	1901	10,235	13.3	3,613	15.8	13,848	13.9
Mauritius.....	1901	72,493	57.1	5,989	38.0	78,482	55.9
Netherlands.....	1899	490,694	32.9	79,584	18.4	570,278	29.6
New Zealand.....	1911	103,644	28.5	7,472	8.3	111,116	24.5
Norway.....	1910					307,528	33.4
Philippine Islands.....	1903	1,163,777	57.8	90,286	8.8	1,254,063	41.3
Porto Rico.....	1899	196,893	73.3	1,868	3.9	198,761	62.8
Portugal.....	1900	1,127,268	65.3	380,293	52.0	1,507,561	61.4
Russia:							
In Europe.....	1897	13,808,505	59.6	1,974,164	38.0	15,782,669	55.6
In Asia.....	1897	2,092,965	69.2	105,137	30.5	2,198,102	65.3
Total.....	1897	15,901,470	60.7	2,079,301	37.5	17,980,771	56.7
St. Lucia.....	1901					15,796	51.1
Serbia.....	1900	311,700	65.5	13,524	50.5	325,224	64.7
Sierra Leone.....	1901	8,705	28.7	4,544	21.7	13,249	25.9
Spain.....	1900	3,741,730	58.1	775,270	51.8	4,517,000	56.9
Sweden.....	1900	761,016	52.4	333,264	53.8	1,094,280	52.8
Switzerland.....	1900	392,971	37.1	80,326	16.1	473,297	30.4
Trinidad and Tobago.....	1901	51,744	54.7	25,765	39.3	77,509	48.4
Union of South Africa.....	1904	863,223	56.3	847,057	77.5	1,710,280	65.1
United Kingdom.....	1901	2,109,812	16.3	152,642	2.9	2,262,454	12.4

¹ Not including the District of Columbia. There have been deducted from the figures as given in the Thirteenth Census (vol. 4) persons engaged in forestry, lumbering, and fishing.—[Editor.]

United States.—Geological Survey. (*Department of the Interior.*) *Mineral resources of the United States, 1914.* Washington, 1916. 2 vols. (*Part I, Metals; Part II, Nonmetals.*)

Contains statistics of production, value of product, and prices in certain instances, of metal and nonmetal minerals mined in the United States during the year 1914. The data relating to coal have always been of value by reason of the labor data compiled in connection with their presentation.

The coal mines of the United States gave employment in 1914 to 763,185 men, of whom 179,679, or 23.6 per cent, were employed in the anthracite mines of Pennsylvania, and 583,506, or 76.4 per cent, in the bituminous mines. The average working time, 245 days, made by the anthracite workers was only exceeded in two other years, 1911 (246 days) and 1913 (257 days). The average time in the bituminous mines (195 days) was 37 days less than in 1913 and the lowest, except in 1908 (193 days), since 1896. The average number of days of employment for all of the coal workers in the United States was 207 days in 1914, which was 31 days less than in 1913 and the lowest since 1908. The average yearly tonnage of bituminous coal per man in 1914 was 724, as compared with 837 in 1913, and the yearly tonnage of the anthracite workers was 505, against 520 in 1913. The daily average for bituminous coal and lignite, however, was the highest on record, 3.71 tons, as compared with 3.68 in 1912, the previous high record. The daily average for anthracite, 2.06 tons, except for that of 1913 (2.02 tons), was the lowest since 1891, or in 23 years.

The apparent efficiency of the anthracite workers as indicated by these statistics has shown a tendency to decline since 1899, when the maximum of 2.50 tons per day was obtained. On the contrary, the average daily production by each employee in the bituminous mines has increased more or less uniformly through the 25 years for which these statistics have been compiled from 2.56 tons in 1890 to 3.71 in 1914, a gain in 25 years of almost 45 per cent. The apparent increase in the efficiency of the employees in the bituminous mines has been due in large measure, as shown elsewhere in this report, to the steady increase in the use of mining machines and to the increased ratio that machine-mined coal bears to the total bituminous production.

Wage agreements in the organized bituminous coal mining regions signed in 1912 expired in 1914. Strikes or suspensions occurred in nearly every district following the expiration of the old agreements, but for the most part the men returned to work pending a settlement, and, except in Ohio, these suspensions had little effect upon the total output.

— *Government Printing Office. Annual report of the Public Printer for the fiscal year ended June 30, 1915.* Washington, 1915. 613 pp.

This report contains, in addition to the annual report of the Public Printer, the twenty-first annual report of the Superintendent of Documents.

The total expenditures for maintenance, operation, and general expenses of the Government Printing Office, not including expenses of the office of the Superintendent of Documents, were \$6,155,621.25, a reduction of \$297,680.62 from the figures of the previous year.

As compared with the previous year, the average daily number of employees decreased by 126. Operating expenses and the computed value of product both decreased approximately 5 per cent.

In the emergency hospital room 2,647 medical and surgical cases were treated, and 1,166 wounds redressed in cases where the employees remained at work after being injured and did not apply for compensation. It is stated that approximately \$5,000 was expended during the fiscal year as compensation for injuries under the Federal compensation act of 1908.

A ventilating system, it is reported, was installed in the linotype section because it was realized that the employees were being endangered by the fumes and noxious gases arising from the molten metal in the linotype pots.

— *Public Health Service. Tuberculosis among industrial workers; report of an investigation made in Cincinnati, with special reference to predisposing causes.* Washington, 1916. 143 pp. plates, folded tables. (*Public Health Bulletin No. 73, March, 1916.*)

This bulletin will be reviewed in a future issue of the REVIEW.

FOREIGN COUNTRIES.

Cuba.—*Secretaria de Hacienda. Seccion Estadística. Inmigración y movimiento de pasajeros en el año 1915. Havana, 1916. 23 pp. folder.*

Report of the secretary of finance on immigration and passenger movement at Cuban ports, classified by sex, nationality, literacy, etc.

Ireland.—*Department of Agriculture and Technical Instruction. Agricultural statistics, Ireland, 1914: Report and tables relating to Irish agricultural laborers. London, 1915. 35, [1] pp.*

This pamphlet gives statistics of numbers employed and wages of Irish agricultural laborers in 1914.

The total number of agricultural laborers available in Ireland in 1911 was 199,900, as compared with 231,871 in 1901. For the same years the number of available general laborers was 102,099 and 79,035, respectively. The number of persons in Ireland who migrated each year for agricultural work, it is reported, has fallen off considerably in recent years. The number was approximately 13,000 in 1914, 15,000 in 1913, 16,000 in 1912, while in 1900 it was 32,000.

Weekly wages of male agricultural laborers who do not live in free cottages or receive allowances of any kind were as follows:

Plowmen, 13s. to 15s. (\$3.16 to \$3.65).

Cattlemen, 11s. 6d. to 13s. 6d. (\$2.80 to \$3.28).

General laborers, 11s. to 13s. (\$2.68 to \$3.16).

Boys, 8s. to 9s. 6d. (\$1.95 to \$2.31).

These data are applicable for the whole of Ireland, and it should be remarked that there are considerable variations as between the different counties.

The working hours for agricultural laborers during the six months, May to October, are usually from 7 a. m. to 6 p. m., with an hour's rest for dinner; in winter the working period extends from light to darkness. Plowmen and cattlemen ordinarily have the longest hours, having to come earlier and to remain longer than the less skilled workers.

Germany.—*Statistisches Amt. Bewegung der Bevölkerung im Jahre 1912. Berlin, 1916. 52, 183 pp. (Statistik des Deutschen Reichs, Band 266.)*

This volume forms the continuation of a statistical series, begun in 1872, on the movement of population in Germany. Besides statistics concerning births, deaths, and marriages during 1912, the volume contains statistics of emigration for the year 1913.

During 1913 a total of 25,843 persons, or 39 per 100,000 of population, emigrated from Germany. During the 10-year period 1904–1913 the rate of emigration varied between 28 and 51 per 100,000 of population. Of the total for the year 1913, 19,124, or 74 per cent, emigrated to the United States.

Great Britain.—*Board of Trade. Handbooks on London trades: Leather, fur, brush making, and feather trades. London, 1915. 30 pp.*

This is one of a series of handbooks issued for the information of young persons that expect to become wage earners. It aims to show the opportunities available for employment in any particular industry, and sets forth the qualifications necessary for entrance into the trade, the amount of trade training necessary for its pursuit, and other information of value to the prospective wage earner.

————— *Statistical abstract for the United Kingdom in each of the last 15 years from 1900–1914. Sixty-sixth number. London, 1915. 431 pp.*

A summary of the principal statistical data for the United Kingdom.

————— *Home Department. Coal Mine Organizations Committee. Second general report of the departmental committee appointed to inquire into the conditions prevailing in the coal-mining industry due to the war. London, 1916. 33 pp.*

The first general report of this committee was issued early in 1915, and a summary of it may be found in the REVIEW for July, 1915 (vol. 1, No. 1, pp. 56–58). The

second general report listed above will be discussed in a future number of the REVIEW.

Great Britain.—*India Office. Statistical abstract relating to British India. 1904-5 to 1913-14. Forty-ninth number. London, 1916. 285 pp.*

Among the statistical tables are found data relating to the number, members, financial position, etc., of cooperative societies; wage rates of postal runners and postmen; also of employees in a woolen mill in northern India; average wage rates of agricultural employees and of certain occupations in the building trades.

Wholesale and retail prices, particularly of food grains and of staple articles of export and import, are also included.

——— *Local government board. Forty-fourth annual report, 1914-15. London, 1916. 2 vols.*

Part I contains an administrative report of the poor law, the unemployed-workmen act, old-age pension act, and a report on special work arising as a result of the war in the prevention and relieving of distress, care of war refugees, etc. Part II relates to housing and town planning.

Notwithstanding the situation created by the war, the report states, the total number of persons in receipt of poor relief in England and Wales was smaller at the end of the fiscal year 1915 than at the end of the preceding year—652,152, as compared with 672,120.

Likewise the operations of the so-called distress committees which furnish situations for the unemployed, as well as provide relief work, were on a smaller scale than in previous winters. The number of pensioners in the United Kingdom on March 26, 1915, was 987,238, an increase of 0.3 per cent over the preceding year.

During the year urban and rural authorities have sanctioned housing loans to the amount £1,125,176 (\$5,475,669), of which, however, a very small amount will be available during the continuance of the war. These sums provide for the purchase of 730 acres of land and the erection of 4,407 dwellings or tenements and a common lodging house, of which 245 acres of land and 1,144 houses are in rural districts.

The following table shows the amount of loans and the number of houses erected since December 3, 1909:

NUMBER AND AMOUNT OF LOANS AUTHORIZED FOR THE ERECTION OF HOUSES, 1910 TO 1915.

Year ending Mar. 31—	Urban authorities.			Rural authorities.			Total.		
	Num- ber of author- ities.	Amount of appropri- ations.	Houses to be built.	Num- ber of author- ities.	Amount of appropri- ations.	Houses to be built.	Num- ber of author- ities.	Amount of appropri- ations.	Houses to be built.
1910.....	2	\$65,844	78	1	\$1,314	.....	3	\$67,158	78
1911.....	12	493,181	464	1	1,216	.....	13	494,397	464
1912.....	29	980,921	882	16	133,561	139	45	1,114,482	1,021
1913.....	46	1,634,536	1,549	22	289,834	331	68	1,924,370	1,880
1914.....	79	2,753,758	2,465	45	942,057	872	124	3,695,815	3,337
1915.....	110	4,197,069	3,264	72	1,278,600	1,144	182	5,475,669	4,408

¹ Including 1 lodging house.

——— (London).—*County council. Annual report of the Council, 1914. Vol. 3: Public health (including the report of the county medical officers of health and school medical officers, main drainage, housing of the working classes). London [1916?], iii, 155, viii pp.*

That portion of the report concerning housing conditions of the working classes summarizes the work accomplished and that in progress.

Cottages capable of accommodating 191 persons were completed during 1914, at an approximated cost for building and plans of £7,701 [\$37,477]. The erection of new

cottages designed to accommodate 785 persons, and other works incidental to the development of the various estates were undertaken, the total cost of which is estimated at £33,641 [\$163,714].

The council's dwellings on December 31, 1914, contained accommodations for 57,387 persons, on the basis of two persons in a room.

The total expenditure on capital account on the council's working-class dwellings and estates up to March 31, 1915, amounted to £3,056,646 [\$14,875,168]. This does not include liabilities under contracts for buildings in course of erection. The capital expenditure during 1914-15 amounted to £34,733 [\$169,028].

A memorandum prepared by the housing manager states that 76 cottages, providing accommodations for 580 persons, were completed and opened between April 1, 1914, and March 31, 1915. Up to March 31, 1915, a total of 6,420 tenements in blocks and 3,402 cottages, containing altogether 28,252 rooms, and 1,874 cubicles in lodging houses, had been provided and opened. Accommodation was thus provided for 57,942 persons. The gross rent receivable for the year was £228,369 8s. 4d. (\$1,111,360). The surplus, after providing for interest and sinking fund charges on the capital expended, is £12,625 10d. (\$61,440), which, after adding interest on cash balances, and differences between totals of debt charges on cash and stock basis and deducting increases in salaries granted on war allowances, gives a net surplus of £16,488 17s. 7d. (\$80,243), or 7.2 per cent of gross rental. The interest and sinking fund charges amounted to 49.2 per cent of gross rental. The sinking fund which will redeem the capital expended on lands and buildings within a period of 60 years was increased by £27,174 18s. 4d. (\$132,247), and now amounts to £260,377 11s. 5d. (\$1,267,127), and the unexpected accumulations to the repairs and renewal fund amount to £67,027 17s. 3d. (\$326,191). During the year £22,400 7s. 1d. (\$109,011) was spent for repairs. A census of the council's dwellings taken in March, 1915, showed that the average number of persons per room was 1.27.

Netherlands.—*Directie van den Arbeid. De Arbeid van vrouwen en meisjes in het winkelbedrijf, benevens eenige mededeelingen omtrent dit laatste. Uitgegeven voor rekening van het Departement van landbouw, nijverheid en handel. The Hague, 1915. vii, 80 pp.*

A report of an investigation of the conditions of labor of female persons in stores and small shops in the Netherlands. The report is presented under 10 heads: General summary; hours of labor, and earnings; closing hours; food and lodging; Sunday rest and holidays; hygienic conditions; age and social position of female shop employees; general information; conditions in Rotterdam and The Hague; and conclusion.

The investigation covered 2,482 shops and stores, employing 5,855 female persons. Five groups of shops were recognized: Manufacturing shops; bakeries and confectioneries; household notion shops; books and stationery; and jewelry shops.

There were 5,133 persons working less than and 722 working more than 13 hours per day. Monthly wages were as follows:

MONTHLY EARNINGS OF FEMALE EMPLOYEES IN STORES AND SHOPS IN THE NETHERLANDS.

	Under 8 florins (\$3.22).	8 to 12 florins (\$3.22 to \$4.82).	12 to 20 florins (\$4.82 to \$8.02).	20 to 30 florins (\$8.02 to \$12.06).	30 to 40 florins (\$12.06 to \$16.08).	Over 40 florins (\$16.08).	Total.
With board.....	108	323	591	370	126	66	1,584
Without board.....	513	525	940	991	584	718	4,271
Total.....	621	848	1,531	1,361	710	784	5,855

Netherlands.—*Rijksverzekeringsbank. Verslag omtrent den staat der Rijksverzekeringsbank en hare werkzaamheden in het jaar 1914. The Hague, 1916. 239, vii pp. Folded tables and diagrams.*

This is a report for the year 1914 of the State insurance bank organized for the administration of the Dutch compensation act of 1901. Compensation is payable for accidents in the course of employment causing death or disability for over two days; the act covers practically all manufacturing, mining, quarrying, building, and engineering enterprises, and all establishments using power or handling explosive materials, together with transportation and fishing in internal waters; but agriculture is excluded. All workmen, both in private and public employment, are included. During the year 1914 there were established 75,006 accidents subject to compensation, as compared with 82,703 in 1913, 76,496 in 1912, 68,485 in 1911, and 62,963 in 1910. The total number of accidents reported was, however, larger in each year by from 4 to 5 per cent.

Of the accidents compensated in 1914 and for which compensation had terminated on July 1, 1915, 18,747 were compensated for less than 2 days, 50,488 from the second to the forty-second day, 3,888 for more than 42 days, 536 for total or temporary disability, and 293 for death; and in the case of 1,052 accidents compensation had not terminated on the above date, while in two cases final decision as to the amount and character of the compensation had not been made.

AMOUNT PAID IN BENEFITS (MEDICAL COSTS, BURIAL EXPENSES, ACCIDENT COMPENSATION TO DEPENDENTS, ETC.), CLASSIFIED BY INSURANCE CARRIERS UNDER THE DUTCH COMPENSATION LAW, 1905 TO 1914.

Year.	State insurance bank.	Employers carrying own risk.	Stock companies.	Total
1905.....	\$266,429.81	\$37,543.78	\$534,557.84	\$838,531.43
1910.....	604,290.31	46,824.67	661,634.35	1,312,749.34
1911.....	648,024.89	56,568.76	738,967.18	1,443,560.83
1912.....	709,039.21	66,074.41	840,804.88	1,615,918.50
1913.....	757,056.07	75,677.38	971,140.67	1,803,874.11
1914.....	752,866.33	83,903.18	1,008,300.88	1,845,070.39

COST OF ADMINISTRATION OF THE COMPENSATION ACT OF, 1901.

Year.	Total.	State portion.		Stock companies and associations.		State insurance bank.	
		Amount.	Percent of total.	Amount.	Percent of total.	Amount.	Percent of total.
1905.....	\$391,369	\$100,720	25.73	\$111,485	28.49	\$179,164	45.78
1910.....	492,031	185,181	37.64	160,765	32.67	146,085	29.69
1911.....	519,514	198,356	38.18	181,806	35.00	139,352	26.82
1912.....	544,539	209,952	38.55	197,804	36.33	136,783	25.12
1913.....	572,520	221,959	38.77	224,560	39.22	126,001	22.01
1914.....	583,084	226,827	38.90	239,695	41.11	116,562	19.99

New Brunswick.—*Factory Inspector. Report for the year ending December 31, 1915.*

New Zealand.—*Registrar General's Office. The New Zealand Yearbook, 1915. Twenty-fourth year of issue. Wellington, 1915. 1,004 pp.*

Contains in text and tabular form information concerning the economic, political, social, legal, and educational conditions in New Zealand. It is divided into 33 sections together with a supplement on topics of special interest. Contains considerable matter of interest to labor.

Ontario.—*Bureau of Labor. Sixteenth report for the year ending December 31, 1915. Toronto, 1916. 267 pp., illus.*

Among the subjects with which this report concerns itself are the operations of the free employment bureaus; wages and hours of labor as reported by trade-unions and by manufacturers; cooperative societies; labor legislation; trade disputes; and municipal and public utility statistics. There is also contained in the report a directory of labor organizations in Canada.

Sweden.—*Statens Livsmedelskommission. Folknäringens tryggande under rådande kris. Stockholm, 1915, 1916. 2 vols.*

These two volumes contain the report of the State commission on the conservation of the food supply during the war as affecting Sweden from the time of its organization, November 8, 1914, to December 31, 1915. A summary of the report may appear in a future number of the REVIEW.

Western Australia.—*Registrar of Friendly Societies. Report of proceedings for the year ending June 30, 1915. Perth, 1916. 27 pp.*

This is a report under the authority of various acts concerning the membership and financial data of mutual benefit societies and related associations. It includes reports under the Friendly Societies Act of 1894, Benefit Building Societies Act of 1863, Cooperative and Provident Societies Act of 1903, Workmen's Compensation Act of 1912, and the Truck Act of 1899.

OFFICIAL PERIODICAL PUBLICATIONS RELATING TO LABOR.

LABOR DEPARTMENTS AND BUREAUS.

Denmark.—*Statistiske Efterretninger udgivet af det Statistiske Department. Copenhagen.*

April 3, 1916 (Vol. 8, No. 5).—Special live stock census, February, 1916; Retail prices, March, 1916; Unemployment, January, 1916.

April 19, 1916 (Vol. 8, No. 6).—Consumption of alcohol, 1915; Production and consumption of oleomargarine, 1915; Production and import of cigarettes, 1915; Retail prices, April, 1916; Population of the Faroe Islands, February, 1916; Index number of the Economist.

Finland.—*Arbetsstatistisk Tidskrift utgifven af Industristyrelsen Finland. Helsingfors.*

No. 1. 1916.—Retail prices (text statement), 1915; Employment conditions in the lumber industry; Recent labor legislation in Norway; Reports from foreign countries; Maximum government prices, December 5–11, 1915; Tables of prices, fourth quarter, 1915.

No. 2. 1916.—Relative sphere of State factory inspection and inspection of the hand working trades by municipalities; Mutual benefit societies of workingmen, 1914; Industrial accidents, 1913; Employment office placements, fourth quarter, 1915.

Germany.—*Reichs-Arbeitsblatt, herausgegeben vom Kaiserlichen Statistischen Amte, Abteilung für Arbeiterstatistik. Berlin.*

March, 1916.—Labor market in Germany, February, 1916; Labor market in foreign countries (Great Britain, Switzerland, Norway, United States); State of employment in Germany in February, 1916, according to reports from various industries and from sick funds; Unemployment in German trade-unions, February, 1916; Unemployment in foreign countries (Austria, July to October, 1915; Netherlands, December 1915); Labor market in Germany, middle of February to middle of March, 1916, according to reports of free employment offices; Activities of free employment offices, February, 1916; Social welfare work for war invalids (continued); Refunding of building loans on workmen's dwellings in the district of the State insurance institute of the Rhine Province by means of life insurance; Labor disputes in Germany, fourth quarter, 1915; Financial reports of German savings banks, 1915, January, 1916; German invalidity and survivors insurance, 1914; Decisions of industrial courts; Statistical tables of the labor market.

Great Britain.—*The Board of Trade Labor Gazette. London.*

April, 1916.—Employment chart; The labor market; Special articles on—Employment in Germany in February; Retail food prices in the United Kingdom, Berlin, Italy, and Australia; War and wages in France; Cooperation in agriculture in 1914; Small holdings and allotments societies; Industrial fatigue; Output of coal in the United Kingdom; Argentine workmen's compensation act; Labor in the British dominions oversea and in foreign countries—Canada, Australia, Russia, Austria-Hungary, Norway, Sweden, Denmark, United States; Board of trade labor exchanges; Statistical tables: Trade disputes; Changes in rates of wages; Sliding scale changes in wages; Prices of wheat, flour, and bread; Diseases of occupations; Fatal industrial accidents; Building plans; Unemployment insurance; Pauperism; Foreign trade; Distress committees. Legal cases; Recent conciliation and arbitration cases; Trade boards act, 1909; National insurance acts, 1911–1915; Appointment of certifying surgeons; Publications relating to labor received during March.

Italy.—*Bollettino dell' Ufficio del Lavoro. Ministero di Agricoltura, industria e commercio. Rome. (Monthly.)*

November–December, 1915.—Labor disputes in Italy, third quarter, 1915; Statistics of employment on public works, second quarter, 1915; Retail prices of foodstuffs and other articles of general consumption sold by cooperative stores, August, September, and October, 1915; Legislation and demands of workmen's organizations in Canada in the matter of social hygiene; A model factory (National Cash Register Co., Dayton, Ohio) from the viewpoint of industrial hygiene; Workmen's housing in Sweden; Report of the United States Commission on Industrial Relations; Court decisions affecting labor.

————— (Semimonthly.)

April 1, 1916.—Labor market, by localities and industries; Labor disputes, February and first half of March, 1916; Employers' and employees' associations; Congresses and conventions; Retail prices and index numbers of foodstuffs in Italian cities, first six months, 1914, and February, 1916; Retail prices of foodstuffs in foreign countries—Great Britain (increase in March, 1916, over July, 1914); Germany, Berlin (increase in January, 1916, over July, 1914). Establishment of a provincial labor office in Milan; Activities of the labor office. Legislation: Decree, March 16, 1916, providing temporary restrictions on the issuance of passports; Regulations for the application of the decree, January 2, 1916, authorizing the Government to extend military discipline to dock labor at Italian seaports; Enforcement of social legislation; Court decisions affecting labor.

April 16, 1916.—Labor market by localities and industries; Labor disputes, second half of March, 1916; Employers' and employees' organizations; Congresses and conventions; Miscellaneous announcements; Activities of the labor office; Decree, March 30, 1916, limiting during the war the production and sale of steel, iron, cast iron, and other metals; Enforcement of social legislation; Occupational diseases in England.

Netherlands.—*Maandschrift van het Central Bureau voor de Statistiek. The Hague.*

February, 1916.—Review of the labor market, January, 1916; Fisheries and dock labor, and employment of interned soldiers, February, 1916; Unemployment, and unemployment benefits, January, 1916; Unemployment in the building trades, November and December, 1915, and January, 1916; Labor exchanges, 1915 and January, 1916; Strikes and lockouts, 1915, and January, 1916; Working conditions on public works; Collective agreements; Wage increases; Employers' and employees' organizations; Wholesale prices, 1913 to February, 1916; Retail prices (index numbers), 1913 to 1915 and January, 1916; Coke prices, 1914, 1915, and January, 1916; Number and classes of passports issued; Emigration to Egypt; Court decisions. Miscellaneous reports on housing, public contracts awarded, inspection of labor on vessels in Dutch ports, accidents, invalidity pensions, etc. International: Résumé of war measures (Germany, Denmark, Great Britain, Russia, Greece, Rumania); Labor market in foreign countries (Denmark, France, Great Britain, Norway, Austria, Switzerland); Labor exchanges (Finland, Great Britain, Austria, Sweden, Switzerland); Strikes and lockouts (Great Britain, January, 1916; Italy, December, 1915). Wholesale and retail prices in foreign countries (Finland, Great Britain, Italy, Austria, Switzerland); Factory inspection in Great Britain and Ireland, 1914. Statistical tables relating to the labor market, housing, insurance, hours of labor, labor exchanges, and public finance.

New York.—*The bulletin issued monthly by the New York Industrial Commission. Albany.*

April, 1916.—Commissioner Lynch's interpretation of rule No. 2 regarding fire escapes in factories and other places of work; Annual report (summary) on workmen's compensation, 1915; Strikes mediated; Cost of accidents under the State fund;

Anthrax conference; Decisions of the Commission and of the Appellate Court affecting labor; Variations from the Code granted by the Commission; The labor market; Factory inspections.

New Zealand.—*Journal of the Department of Labor. Wellington.*

February, 1916.—Condition of employment and trade, January, 1916; Reports of the women's employment exchange branches; Reports from trade-unions; Recent legal decisions affecting labor in Great Britain; Statistics of registration of unions under the industrial conciliation and arbitration act, changes titles of unions, employment, cooperation, accidents, current retail prices, and prices for the quarter ending December, 1916; Labor conditions in other countries (Great Britain Board of Trade Labor Gazette).

March, 1916.—Conditions of employment and trade, February, 1916; Reports from the women's employment offices; Reports from trade-unions; Recent legal decisions; Legal decisions affecting labor in Great Britain; Days designated for the closing of shops for year ending February 28, 1917; Statistical tables on situations filled, cooperative works, industrial accidents, trade-unions registered, retail prices, etc.; Employment in Great Britain, 1915; Welfare supervision in munition works in Great Britain; Industrial arbitration legislation in Norway.

Norway.—*Sociale Meddelelser utgit av Socialavdelingen under Departementet for Sociale Saker, Handel, Industri og Fiskeri. Christiania.*

No. 1, 1916.—Retail prices, January and February, 1916; Increased cost of living in Christiania; Effect of recent high prices upon consumption; Labor market January and February, 1916; Public employment office placements, April to December, 1915; French minimum wage law for home workers in the clothing industry; Interior colonization in the United States.

Supplement, No. 1, 1916, prepared by the State Insurance Institute, consisting of miscellaneous reports from the institute.

Pennsylvania.—*Monthly Bulletin of the Pennsylvania Department of Labor and Industry. Harrisburg.*

March, 1916 (Vol. 3, No. 3).—Cooperation between labor and government; Occupations involving exposure to extremes of temperature, excessive moisture, and abnormal air pressure; Fire hazards from electricity. Hints for safety of employees: Timely hints on safety from fire; Timely hints for electricians; Timely hints for woodworkers; Timely hints for repairmen. Boiler explosion caused by neglected safety valve; Preventable accidents; Safeguarding structural-steel workers in office building erection; Motion pictures teach safety; A misdemeanor to carry matches into a powder mill; Conference on industrial diseases; Bureau of inspection; High record of 1916 accidents reported to the bureau of statistics and information; The division of municipal statistics of the bureau of statistics and information; Production reports; Occupations of women in Pennsylvania; Supervision of private agencies by the bureau of employment of the department of labor and industry; Schedule of merit rating as applied to Pennsylvania workmen's compensation insurance; Bulletin issued by the workmen's compensation board.

Spain.—*Boletín del Instituto de Reformas Sociales. Publicación Mensual. Madrid.*

March, 1916.—Report of the secretary's office and the special divisions: Industrial accidents occurring in 1914; Statistics of labor disputes; Conditions prevailing in the rice-growing district in the province of Valencia. Social progress; Legislation: Postal savings bank regulations; Limiting the maximum income from low-cost dwellings. War measures passed in different countries (Germany, continued); Norway, Law, August 6, 1915, providing for State intervention in industrial disputes; Germany, strikes and lockouts. August 1, 1914, to July 31, 1915; Great Britain, strikes in December, 1915.

Sweden.—*Sociala Meddelanden utgivna av K. Socialstyrelsen. Stockholm.*

No. 2, 1916.—The labor market, January, 1916; Reports on employment conditions from employers, fourth quarter, 1915; Unemployment among trade-unions, October 1, November 1, December 1, 1915; State and municipal war measures; Cost of living in Stockholm, 1904–1915; Repeal of decree of April 10, 1915, granting unemployment aid to tobacco workers; Restrictions on the sale of wines and other spirituous liquors; Activities of the factory inspectors, October to December, 1915; Fatal industrial accidents; Brief notices (mainly from foreign countries); Public employment exchanges, January, 1916; Retail prices and cost of living, 1905 to January, 1916; Live-stock prices, 1905 to January, 1916; Live-stock supply at public slaughterhouses, January, 1916; Estimated consumption from public slaughterhouses in certain localities; Fish prices in Stockholm and Gothenburg, January, 1915, 1916.

No. 3, 1916.—Labor market, February, 1916; State and municipal war measures; Public employment office reports, 1915; Working conditions, hours and wages among Swedish agricultural laborers, 1914; Building activity in the larger towns of Sweden, 1912–1915; Proposed law on the administration of the pension fund; Report of the State insurance institute, 1914; Hours of labor in barber and hair-dressing establishments; State subsidy to lecture associations for extension courses, 1916; Strikes and lockouts in Sweden, fourth quarter, 1915; Reports of labor inspectors concerning fatal industrial accidents; Reports of the State industrial commission; Collective agreements in Denmark; Labor disputes in Finland, 1913 and 1914; Employment offices for salaried employees; Housing in Gothenburg, etc.; Swedish employment office reports, February, 1916; Retail prices and cost of living, 1905 to February, 1916; Live-stock prices, 1905 to February, 1916; Live-stock supply at public slaughterhouses, February, 1916; Estimated consumption at public slaughterhouses in certain localities, February, 1916; Fish prices in Stockholm and Gothenburg, February, 1915, and February, 1916; Farm prices, November, 1915.

International Labor Office (Basel, Switzerland).—*Bulletin des Internationalen Arbeitsamtes. Jena.*

(The German edition of this bulletin, which appears also in French and English, is the earliest published and its contents are therefore here listed.)

Nos. 11 and 12, 1915.—Analyses of the text in Nos 7 to 10; Contents and index of Volume XIV, January–December, 1915; Bibliography.

Nos. 1 and 2, 1916.—National labor legislation—**France:** Decree, September 24, 1915, regulating the application of the law of July 10, 1915 (wages of female home workers in the clothing industry); Circular, October 25, 1915, of the minister of labor relating to the employment of juvenile workers under 16 years of age at circular and band saws. **French Colonies, Tunisia:** Decree, June 15, 1910, regulating labor in industrial and mercantile establishments; Decree, June 15, 1910, regulating the employment of male juvenile workers under 16 years of age in underground work in mines and quarries; Decree, June 15, 1910, regulating the payment of wages of workmen and salaried employees; Decree, June 15, 1910, promulgating the international convention on prohibition of the use of white phosphorus in the match industry. **Greece:** Law, March 26/April 8, 1914, relating to the payment of wages of workmen and salaries of employees; Royal decree, May 28/June 10, 1914, regulating the hours of labor in tobacco storage houses and factories; Royal decree, October 31/November 13, 1914, amending the preceding decree; Royal decree, December 24/January 6, 1915, amending the decree September 14/27, 1912, relating to the hours of labor in bakeries. **Luxemburg:** Resolution, June 16, 1914, conditionally abrogating in favor of German citizens articles 37 and 47 of the old-age and invalidity insurance law; Resolution, August 21, 1914, regulating the application of articles 4, 5, 6, 8, and 9 of the law of August 21, 1913, providing a weekly day of rest for workmen and

employees; Law, December 14, 1914, amending the law, May 29, 1906, relating to low-cost dwellings. **Panama:** Law No. 6, 1914, regulating the labor of workmen and mercantile employees. **Netherlands:** Law, June 19, 1915, amending the safety law; Resolution, July 2, 1915, containing the text of the amended safety law. **Sweden:** Royal decree, December 31, 1912, prohibiting the employment of minors at specified dangerous occupations. **Switzerland:** Circular, October 12, 1915, of the Federal Council to the cantonal governments relating to the provisions to be enacted by the Cantons for the application of the new factory law. **Uruguay:** Law, November 17, 1915, fixing for the entire territory of the Republic the daily hours of labor of workmen, employees, etc., at eight hours. **War measures:** German Empire, Prussia, Austria, France, Great Britain and Ireland, Greece, Luxemburg, and Switzerland.

MISCELLANEOUS.

Austria.—*Amtliche Nachrichten des k. k. Ministeriums des Innern betreffend die Unfall- und Krankenversicherung der Arbeiter.* Vienna.

March, 1916.—Accident insurance: Accident insurance of war prisoners; Discontinuance of invalidity pensions from a miner's fund during receipt of an accident pension; Decisions of the administrative court; Decisions of the courts of arbitration of workmen's accident insurance institutes. Sickness insurance: Instructions for the annual accounting of sick funds; Decisions of the administrative court.

Germany.—*Amtliche Nachrichten des Reichsversicherungsamts.* Berlin.

February 15, 1916.—Report of the Imperial Insurance Office for the year 1915.

March 15, 1916.—Accident insurance: Circular, December 4, 1915, of the Imperial Insurance Office to the trade accident associations containing instructions as to the method of accounting for purchases of war bonds with funds of the associations; Notice, December 20, 1915, as to approval of safety regulations during the fourth quarter, 1915; Notice, December 23, 1915, as to approval of risk tariffs during the fourth quarter, 1915; Notice, February 11, 1916, containing a list of those unions of communes which are under the jurisdiction of the State insurance offices and not under that of the Imperial Insurance Office; Decisions of the decision senates; Other decisions. Sickness, invalidity, and survivor's insurance: Notice by the imperial chancellor, December 23, 1915, as to the computation of military service and the maintenance of claims in the invalidity and survivors' insurance; Notice of the imperial chancellor, January 7, 1916, regulating the reporting of maternity benefits paid during the war by miners' sick funds; Circular, February 8, 1916, of the Imperial Insurance Office showing for each insurance carrier of the invalidity insurance system the number of annually awarded, expired, and current invalidity sickness, old-age, and survivors' pensions; Decisions on appeals; Decisions of the decisions senates; Other decisions; Disbursements of the invalidity insurance institutes, November and December, 1915, for pensions and benefits to insured persons and their survivors; Receipts from the sale of contribution stamps, December, 1915, and January, 1916.

**UNOFFICIAL PUBLICATIONS RELATING TO LABOR RECEIVED
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APRIL 1-MAY 15, 1916.**

- Alexander, Magnus W. The physician in industry. Issued by the conference board of physicians in industrial practice. [n. p.] 1916. 12 pp.
- American Federation of Labor. List of organizations affiliated with the American Federation of Labor. Mar. 10, 1916. [Washington, D. C.] 1916. 51 pp.
- Trades-union official journals and labor papers received at headquarters of the American Federation of Labor. Feb., 1916. [Washington, D. C.] 1916. 12 pp.
- Organizers, American Federation of Labor, Mar. 20, 1916. [Washington, D. C.] 1916. 43 pp.
- Metal trades dept. Proceedings of the seventh convention, San Francisco, Nov., 1915. Washington, D. C., 1915. 57 pp.
- Union label trades dept. Proceedings of eighth convention, San Francisco, Nov., 1915. Washington, D. C., 1915. 52 pp.
- American Foundrymen's Association. Committee on industrial education. Abstract of the report for 1915. 11 pp.
- Association des industriels de France contre les accidents du travail. Bulletin . . . no. 27, année 1916. Paris, 1916. 59 pp.
- British Association for the Advancement of Science. Draft interim report of the conference to investigate into outlets for labor after the war. Manchester, 1915. 82 pp. (See summary elsewhere in this issue of the REVIEW, pp. 91-101.)
- The question of fatigue from the economic standpoint. Interim report of the committee consisting of Prof. J. H. Muirhead [and others]. Manchester, 1915. 67 pp.
- Burlington (Vt.) Committee on Social Survey. A survey of the city of Burlington, its charities and housing conditions. [Burlington, 1915.] 85 pp.
- Colorado Fuel and Iron Co. Medical and sociological departments. Thirty-fourth annual report. Pueblo, Colo., 1915. 31 pp.
- Committee for immigrants in America. Professional course for service among immigrants; prepared for the use of colleges and universities, schools of civics and philanthropy, to fit men and women for service among immigrants. N. Y., Committee for immigrants in America [1915]. 24 pp.
- Commons, John R., and Andrews, John B. Principles of labor legislation. New York and London, Harper & Bros. [1916].
- (An extended review of this book will appear in the July number of the REVIEW.)
- Consumers' League of Eastern Pennsylvania. Fifteenth annual report for the year ending Dec. 31, 1915. Philadelphia, 1916. 41 pp.
- Daudé-Bancel, A. Le mouvement ouvrier français et la guerre. Paris, Revière, 1915. 57 pp.
- Day, William A. Group insurance, its aims and its field. [N. Y., 1913.] 6 pp.
- Empire State Vocational Conference Bulletin. v. 1, no. 5. (Albany-Schenectady conference. Feb. 19-20, 1915.) 25 pp.
- Frankel, Lee K. Community sickness survey, Rochester, N. Y., Sept., 1915. Washington, 1916. 16 pp. (Reprint No. 326 from the Public Health Reports, Feb. 25, 1916.)

Frankfurter, Felix, and Goldmark, Josephine. *Franklin O. Bunting v. The State of Oregon*. In error to the Supreme Court of the State of Oregon. Brief for defendant in error. v. 1-2. New York [1916]. 2 v. and index.

(A review of this brief appears elsewhere in this number of the REVIEW, pp. 23-29.)

Gantt, H. L. *Industrial leadership*. New Haven, Yale Univ. press, 1916. 128 pp. Page lectures.

Suggests methods of training for industrial leadership.

Gilbreth, Frank B. *Fatigue study, the elimination of humanity's greatest unnecessary waste; a first step in motion study*. N. Y., Sturgis, 1916. 159 pp.

The book outlines methods of fatigue study and possible means of eliminating or minimizing fatigue.

Glass, Walter M. *The law of workmen's compensation*. Rochester, N. Y., The Lawyers' Cooperative Publishing Co., 1916. 566 pp.

A topical treatment of existing law on workmen's compensation; contains analysis of about 2,000 English decisions in addition to 350 decisions already rendered in this country; was prepared primarily for use as one of the annotations in the Lawyers' Reports, Annotated.

Gowin, Enoch B., and Wheatley, William A. *Occupations. A textbook in vocational guidance*. Boston, Ginn [c1916]. 357 pp.

Hudson, W. G. *Acid accidents*. [n. p., n. d.] 13 pp.

——— *Further studies on acid fume poisoning*. Wilmington, Del., c1911. 10 pp.

——— *Precautions against lead poisoning*. [n. p., n. d.] [4] pp.

Hughes, Florence. *Sociological work of the New Jersey Zinc Co.* [n. p.] 1914. 599 pp.

Insurance Institute of Hartford. *Accident and health insurance, a series of lectures*. Ed. by H. P. Dunham. Hartford, 1915. 155 pp.

Liverpool enquiry and employment bureau for educated women. *Eighteenth annual report, 1915*. 4 pp.

Mote, Carl H. *Industrial arbitration, a world-wide survey of natural and political agencies for social justice and industrial peace*. Indianapolis, Bobbs-Merrill Co., [c1916]. 351 pp.

A consideration of schemes now in existence, both foreign and domestic, for the prevention of industrial disputes, with a presentation of facts showing how such schemes have worked or wherein they have failed to work.

Mowery, H. W. *Some hazards and safety suggestions in connection with construction, inspection, and maintenance of public utilities*. N. Y., 1915. 20 pp.

National Civic Federation. *Welfare dept. Profit sharing by American employers*. N. Y. [1916]. 261 pp.

(See summary elsewhere in this number of the REVIEW, pp. 46-48.)

National Consumers' League. *Memorandum addressed to the joint legislative committee investigating the New York public service commissions on the need of legislation empowering the commissions to regulate hours of work and wages of employees of public utility companies*. Submitted by Pauline Goldmark. N. Y., 1916.

(See summary elsewhere in this number of the REVIEW, pp. 29-33.)

National Education Association of the United States. *Journal of proceedings and addresses of the fifty-third annual meeting, Oakland, Cal., Aug. 16-27, 1915*. Ann Arbor, The Association, 1915. 1193 pp.

In addition to general educational topics, contains important material relating to vocational education and guidance, the linking of school work with business enterprises, child welfare, and administration of compulsory attendance laws.

National Employment Exchange, New York City. *Sixth annual report for the year ending Sept. 3, 1915*. N. Y. [1915]. 20 pp.

Pearson, Robert H. Occupational diseases. New York, The Weekly Underwriter [1915.] 32 pp.

A pamphlet showing substances injurious to health that are found in industrial processes; also a list of industrial poisons with a statement of how they enter the body. Much of the material is taken from Bulletins 100, 127, and 165 of the United States Bureau of Labor Statistics.

Pierce, Paul S. Employers' welfare work in Iowa. Iowa City [1915]. 19 pp. (Iowa University. Extension Bulletin No. 13.)

Redgrave, Alexander. The factory, truck, and shop acts. Twelfth ed. London, Shaw & Sons, 1916. 519. 94 pp.

Saward, Frederick E. The coal trade; a compendium of valuable information relative to coal production, prices, transportation, etc., at home and abroad. N. Y., 1916. 216 pp.

Annual statistics of the coal trade issued by the editor of the Coal Trade Journal; forty-third year of publication.

Schloesser, Henry H. The legal position of trade-unions. Second ed. London, P. S. King, 1913. 268 pp.

Smith, Ellen. Wage-earning women and their dependents. London, The Fabian Society, Nov., 1915. 36 pp. (Fabian women's group publication.)

Summons, Walter. Miners' phthisis. Reports of an investigation at Bendigo into the prevalence, nature, causes, and prevention of miners' phthisis. Melbourne, Stillwell & Co., 1907. 43 pp.

United Fruit Co. Medical dept. Annual report, 1915. Boston, Ellis, 1916. [133 pp.]

Shows the work of the medical department in treating disease on its steamships and in its hospitals and dispensaries in Cuba, Costa Rica, Panama, Guatemala, Colombia, and Honduras; also gives sanitary methods used on vessels and in labor camps.

United Mine Workers of America. Proceedings of the twenty-fifth consecutive and second biennial convention held in Indianapolis, Jan. 18 to Feb. 1, 1916. Indianapolis, Bookwalter-Ball Printing Co., 1916. 2 v.

United Textile Workers of America. Proceedings of the fifteenth annual convention, New York, Oct., 1915. New York, Freytag Printing Co., 1915. 116 pp.

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Women's Labor League, England. Reports, together with report of proceedings. Second, 1907; fourth, 1909; fifth, 1910; seventh, 1912; ninth, 1914; tenth, 1916. London, 1907-1916. 6 v.

Young Women's Christian Associations. United States national board. Commission on household employment. Bulletin No. 2. (The road to trained service in the household.) New York, National Board of the Young Women's Christian Associations, 1916. 11 pp.

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